Municipal Screening Board Data

Spring 2023

UNIT COSTS AND THE MUNICIPAL SCREENING BOARD

FROM M.S. 162.13

Subd. 2.**Money needs defined**. For the purpose of this section money needs of each city having a population of 5,000 or more are defined as the estimated cost of constructing and maintaining over a period of 25 years the municipal state-aid street system in such city. Right-of-way costs and drainage shall be included in money needs. Lighting costs and other costs incidental to construction and maintenance, or a specified portion of such costs, as set forth in the commissioner's rules, may be included in determining money needs. To avoid variances in costs due to differences in construction and maintenance policy, construction and maintenance costs shall be estimated on the basis of the engineering standards developed cooperatively by the commissioner and the engineers, or a committee thereof, of the cities.

FROM MSB RESOLUTIONS

Appointment to the Needs Study Subcommittee

The Screening Board Chair will annually appoint one city engineer, who has served on the Screening Board, to serve a three year term on the Needs Study Subcommittee. The appointment will be made at the annual winter meeting of the City's Engineers Association. The appointed subcommittee person will serve as chair of the subcommittee in the third year of the appointment.

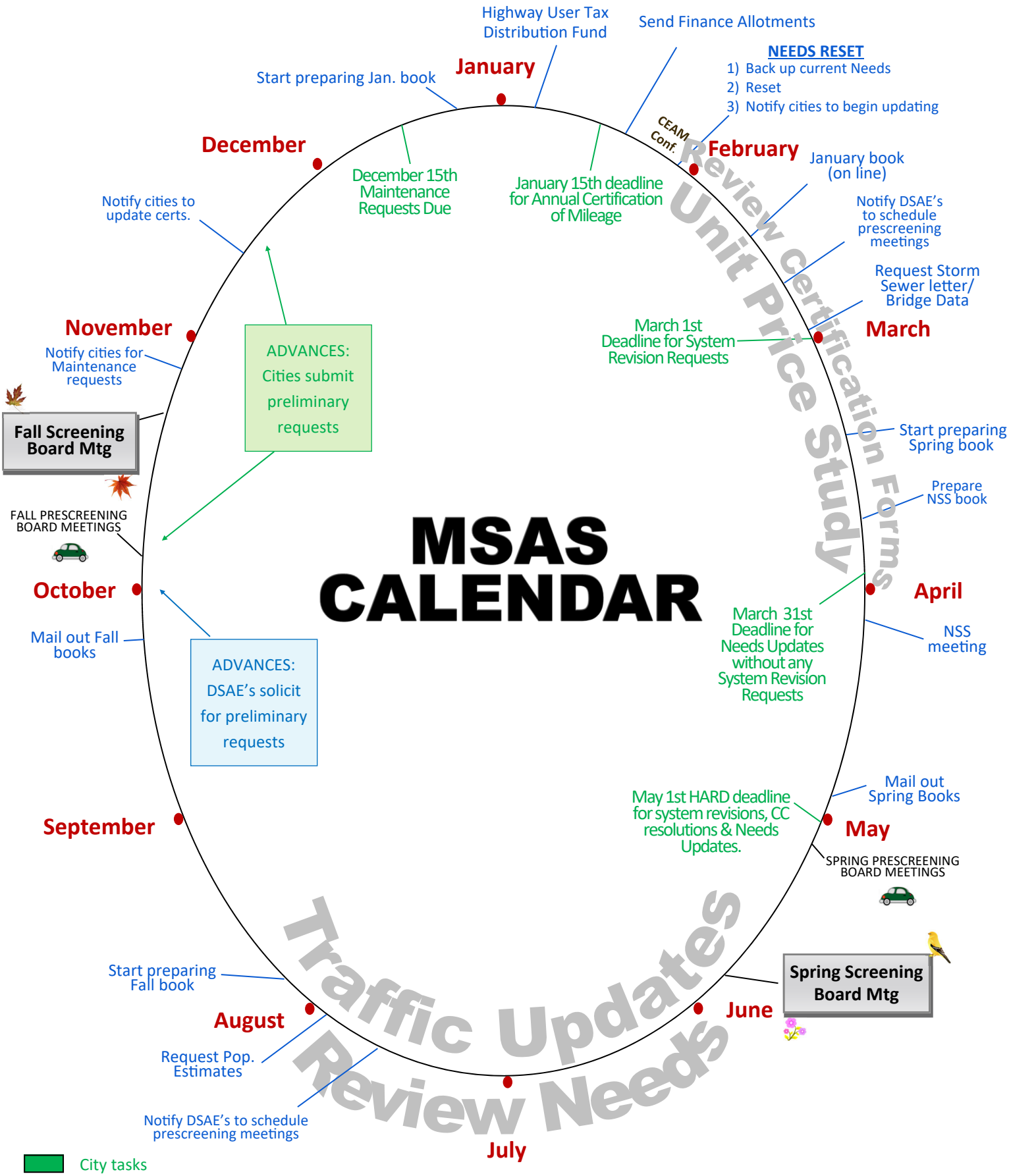
Unit Price Study- Oct. 2006 (Revised May, 2014)

The Needs Study Subcommittee will annually review the Unit Prices for the Needs components used in the Needs Study. The Subcommittee will make its recommendation to the Municipal Screening board at its annual spring meeting.

The Unit Price Study go to a 3 year (or triennial) cycle with the Unit Prices for the two ‘off years’ to be set using the Engineering News Record construction cost index on all items where a Unit Price is not estimated and provided by other MnDOT offices. The Screening Board may request a Unit Price Study on individual items in the ‘off years’ if it is deemed necessary.

Unit Costs – May 2014, (Revised January 2015, May 2015)

The quantities which the Unit Costs for Excavation/Grading, Gravel Base, and Bituminous are based upon will be determined by using the roadway cross sections and structural sections in each of the ADT groups as determined by the Municipal Screening Board and shown in the following table ‘MSAS Urban ADT Groups for Needs Purposes’.


MSAS CALENDAR
January
February
March
April
May
June
July
August
September
October
November
December
Highway User Tax Distribution Fund
Send Finance Allotments
NEEDS RESET
1) Back up current Needs
2) Reset
3) Notify cities to begin updating
CEAM Conf.
January book (on line)
Notify DSAE's to schedule prescreening meetings
Request Storm Sewer letter/ Bridge Data
March 1st Deadline for System Revision Requests
Start preparing Spring book
Prepare NSS book
March 31st Deadline for Needs Updates without any System Revision Requests
NSS meeting
Mail out Spring Books
May 1st HARD deadline for system revisions, CC resolutions & Needs Updates.
SPRING PRESCREENING BOARD MEETINGS
Spring Screening Board Mtg
Start preparing Fall book
Request Pop. Estimates
Notify DSAE's to schedule prescreening meetings
Mail out Fall books
FALL PRESCREENING BOARD MEETINGS
Fall Screening Board Mtg
Notify cities for Maintenance requests
Notify cities to update certs.
Start preparing Jan. book
December 15th Maintenance Requests Due
January 15th deadline for Annual Certification of Mileage
ADVANCES: Cities submit preliminary requests
ADVANCES: DSAE's solicit for preliminary requests
Review Certification Forms
Unit Price Study
Traffic Updates
Review Needs
City tasks
State Aid tasks
Ongoing Processes

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INTRODUCTORY INFORMATION

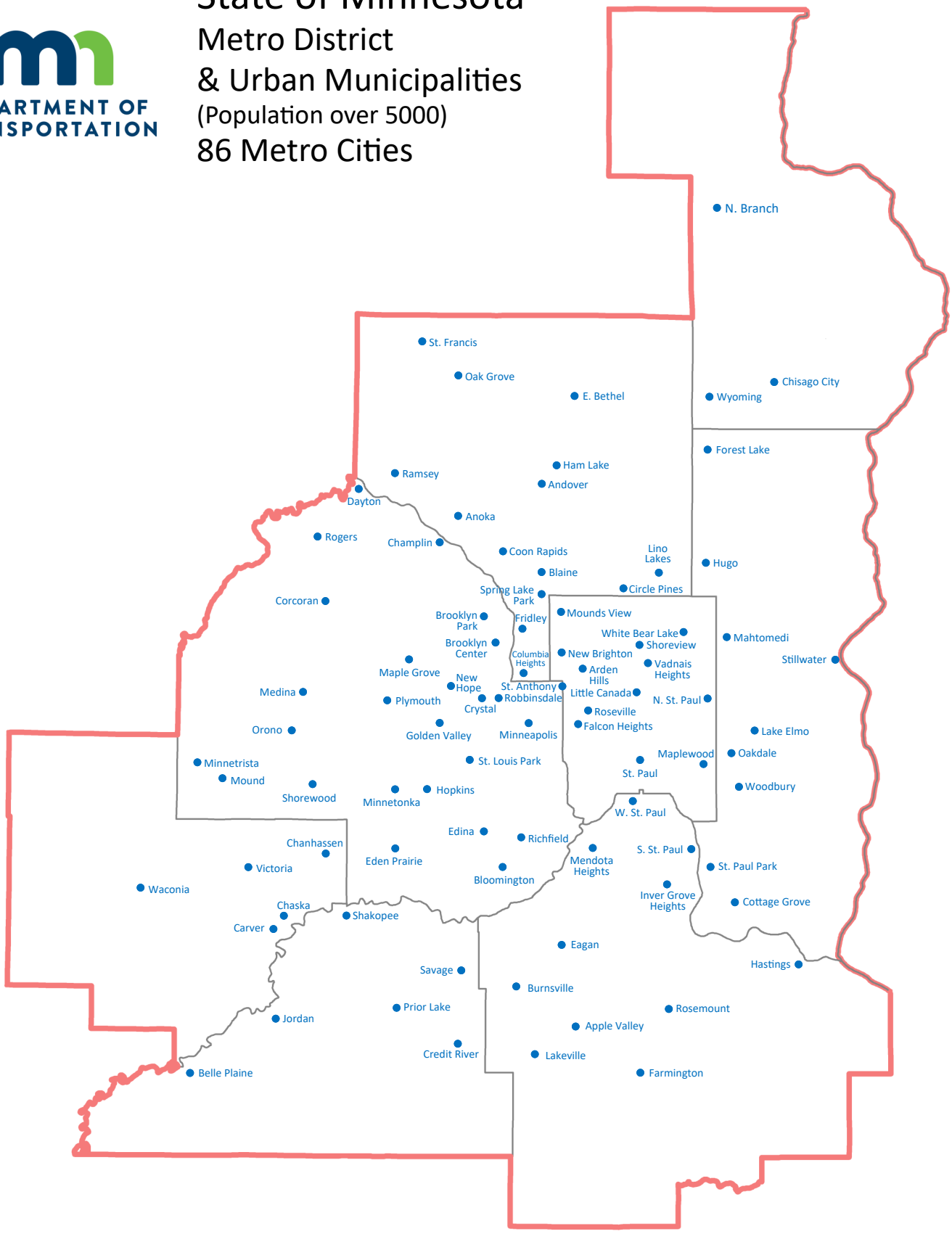
UNIT PRICES AND GRAPHS

STREET LIGHTING RECOMMENDATION

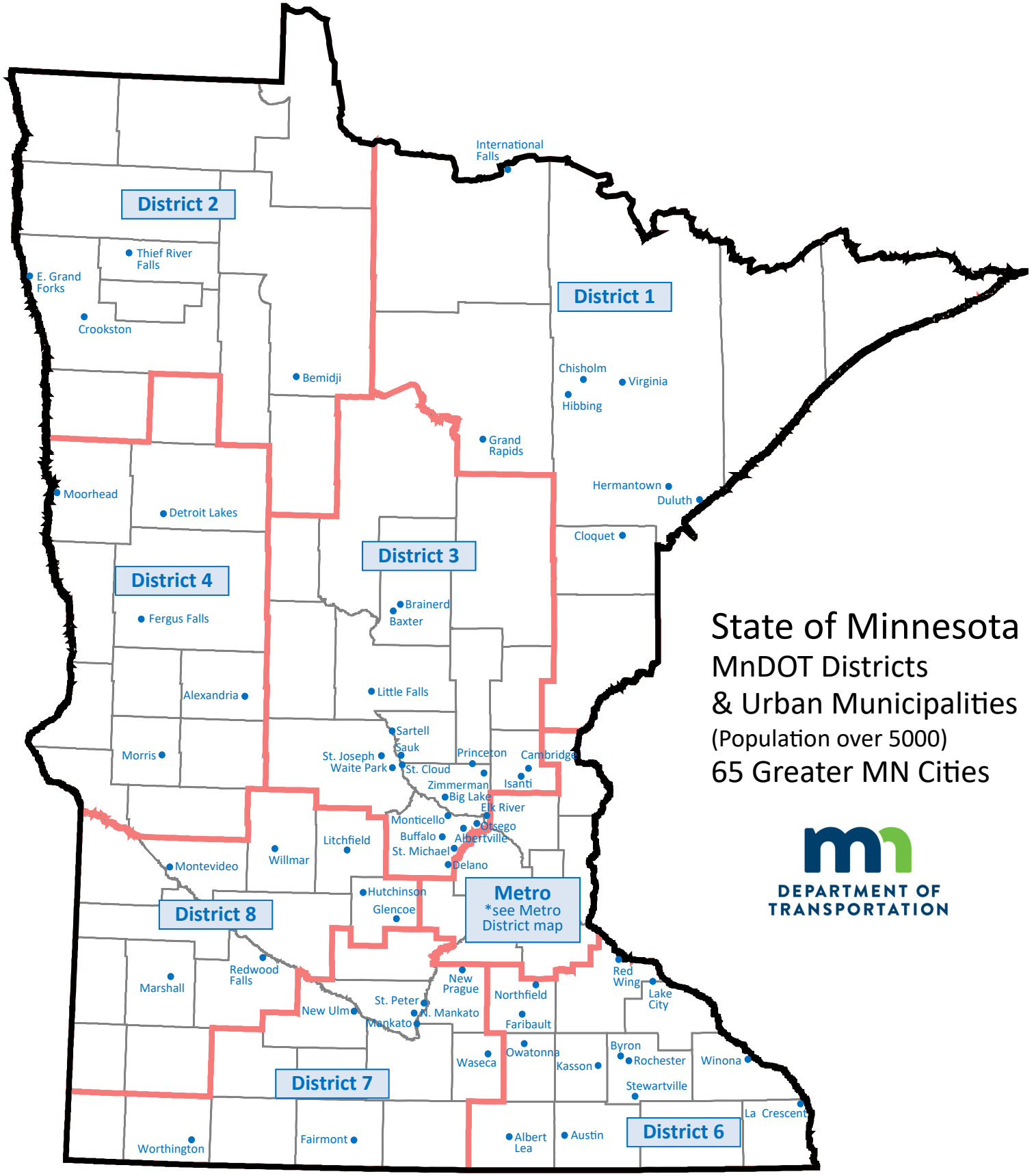
REFERENCE MATERIALS

DEPARTMENT OF TRANSPORTATION

State of Minnesota
Metro District
& Urban Municipalities
(Population over 5000)
86 Metro Cities



Updated 10/2021



State of Minnesota

MnDOT Districts & Urban Municipalities

(Population over 5000)

65 Greater MN Cities

DEPARTMENT OF TRANSPORTATION

Updated 12/21/2022

2023 MUNICIPAL SCREENING BOARD

30-Jan-23

Officers			
Chair	Jen Desrude	Burnsville	(952) 895-4544
Vice Chair	Mark DuChene	Faribault	(507) 333-0361
Secretary	Deb Heiser	St. Louis Park	(952) 924-2551

Members

District	Years Served	Representative	City	Phone
1	2023-2025	Jason Fisher	International Falls	(218) 600-6827
2	2021-2023	Steve Emery	East Grand Forks	(218) 773-5626
3	2021-2023	Layne Otteson	Big Lake	(763) 251-2984
4	2022-2024	Tom Trowbridge	Moorhead	(218) 299-5393
Metro-West	2022-2024	Will Manchester	Minnetonka	(952) 939-8232
6	2022-2024	Brandon Theobald	Kasson	(507) 288-3923
7	2023-2025	Joe Stadheim	New Ulm	(507) 233-2118
8	2021-2023	Chuck DeWolf	Litchfield	(320) 231-3956
Metro-East	2023-2025	Zachary Johnson	Lakeville	(952) 985-4501
Cities	Permanent	Cindy Voigt	Duluth	(218) 730-5200
of the	Permanent	Jenifer Hager	Minneapolis	(612) 673-3625
First	Permanent	Dillon Dombrovski	Rochester	(507) 328-2421
Class	Permanent	Nick Peterson	Saint Paul	(651) 266-6099

Alternates

District	Year Beginning		City	Phone
1	2026	Dave Bolf	Hermantown	(218) 727-5995
2	2024	Sam Anderson	Bemidji	(218) 333-1851
3	2024	Nick Preisler	Saint Michael	(763) 516-7936
4	2025	Tim Schoonhoven	Alexandria	(320) 762-8149
Metro-West	2025	Chris LaBounty	Plymouth	(763) 509-5541
6	2025	Brian DeFrang	Winona	(507) 457-8269
7	2026	Nate Willey	Waseca	(507) 835-9716
8	2024	Mike Amborn	Montevideo	(320) 269-7695
Metro-East	2026	Chris Hartzell	Woodbury	(651) 714-3593

2023 SUBCOMMITTEES

The Screening Board Chair appoints one city Engineer, who has served on the Screening Board, to serve a three year term on the Needs Study Subcommittee.

The past Chair of the Screening Board is appointed to serve a three year term on the Unencumbered Construction Fund Subcommittee.

Needs Study Subcommittee	Unencumbered Construction Funds Subcommittee
Jay Owens Red WIng (651) 385-3600 Expires after 2023	John Gorder Eagan (651) 675-5645 Expires after 2023
Adam Nafstad Albertville (763) 497-3384 Expires after 2024	Justin Femrite Elk River (763) 635-1051 Expires after 2024
Chad Millner Edina (952) 826-0318 Expires after 2025	Michael Thompson Plymouth (763) 509-5501 Expires after 2025

MUNICIPAL SCREENING BOARD MEETING
OCTOBER 25th AND 26th, 2022
ARROWWOOD RESORT, ALEXANDRIA, MN AND MS TEAMS

MINUTES

TUESDAY, October 25th, 2022

I. Call to Order by Chair Desrude 1:02 pm on Tuesday, October 25th, 2022

II. Desrude introduced herself as Chair of the Municipal Screening Board (MSB).

a. Desrude then introduced the following:
   i. Kristine Elwood, – State Aid Engineer
   ii. Bill Lanoux, - Manager, Municipal State Aid Needs Unit
   iii. John Gorder, Eagan – Past Chair of the MSB (Online)
   iv. Justin Femrite, Elk River – Past Chair of the MSB
   v. Michael Thompson, Plymouth – Past Chair of the MSB

b. Desrude introduced Mark DuChene, Secretary of the Municipal Screening Board. DuChene then conducted roll call of the screening board members:

i.	District 1	Caleb Peterson, Cloquet (Online)
ii.	District 2	Steve Emery, East Grand Forks (Online)
iii.	District 3	Layne Otteson, Big Lake (arrived at 1:15pm)
iv.	District 4	Tom Trowbridge, Moorhead
v.	Metro West	Will Manchester, Minnetonka
vi.	District 6	Brandon Theobald, Kasson
vii.	District 7	Jeff Domras, St. Peter
viii.	District 8	Chuck DeWolf, Litchfield
ix.	Metro East	Brian Erickson, Rosemount
x.	Duluth	Cindy Voigt
xi.	Minneapolis	Jenifer Hager
xii.	Rochester	Dillon Dombrovski (Online)
xiii.	St. Paul	Paul Kurtz

c. Desrude also recognized Screening Board Alternates:

i.	District 1	Jason Fisher, International Falls (Online)
ii.	District 7	Joe Stadheim, New Ulm (Online)
iii.	Metro-East	Zach Johnson, Lakeville

d. Desrude recognized Department of Transportation personnel:

i.	Marc Briese	State Aid Programs Engineer
ii.	Krysten Saatela Foster	Dist. 1 State Aid Engineer
iii.	Brian Ketring	District 2 State Aid Engineer (Online)
iv.	Angie Tomovic	District 3 State Aid Engineer
v.	Nathan Gannon	District 4 State Aid Engineer
vi.	Fausto Cabral	District 6 State Aid Engineer
vii.	Lisa Bigham	District 7 State Aid Engineer
viii.	Todd Broadwell	District 8 State Aid Engineer

ix. Dan Erickson Metro State Aid Engineer
x. Julie Dresel Assistant Metro State Aid Engineer
xi. Elisa Bottos CO State Aid.
xii. Angie Murphy CO State Aid
xiii. Mark Vizecky (Online)
xiv. Naomi Eckerd (Online)

e. Finally, Desrude recognized others in attendance:
   i. Marc Culver, Roseville Chair, CEAM Legislative Committee (Online)
   ii. Kyle Wallace, Minneapolis
   iii. Mike Van Beusekom, St. Paul

f. Recognize any Needs Study Subcommittee in Attendance:
   i. Matt Wegwerth, 2022 Chair of the Needs Study Subcommittee (Online)
   ii. Jay Owens (Online)
   iii. Adam Nafstad

g. Recognize any others in attendance
   i. Kyle Wallace, Minneapolis
   ii. Mike Van Beusekom, St. Paul

III. Review of the '2022 Municipal State Aid Street Needs Report'
a. Lanoux reviewed the May Screening Board minutes, Pages 8-15
   i. Desrude called for Motion to approve minutes from the May 2022 MSB.
      i. Motion to approve the minutes by Voigt, second by Trowbridge. Motion carried 12-0, (Otteson absent)

b. Lanoux reviewed Population Data & Needs Data in the report specifically noting:
   i. Action needed for recommendation to Commissioner
   ii. Action needed to fund research account
   iii. Reviewed new MSAS Cities
   iv. Recognized the new and outgoing MSB members and new alternates.
   v. Reviewed the action items from spring MSB meeting.
   vi. Reviewed population estimates and stated that population apportionments are based on the higher of the most recent census or most recent state demographer's estimate
   vii. Stated that the projected apportionment from the HUTDF is estimated to *drop 7% for 2023.*
   viii. Reviewed the apportionments for Cities and pointed out some differences in how Cities draw needs.
   ix. Briefly discussed the street lighting cost and how changing it may affect cities differently. Street Lighting Needs are currently 100,000 dollars per mile across the board. Decreasing the cost (or removing it altogether) may negatively impact smaller cities with more low traffic segments. On the other hand, simply raising

cost across the board may benefit these cities more than the larger urban cities. Lighting needs have not changed since 2006 (no inflationary increase either). An updated cost which increases with ADT has been considered.

x. Reviewed mileage of certain cities and discussed how the needs are calculated after applying adjustments and pointed out the newest paragraph concerning any exemptions for the excess balance adjustment.

xi. Noted that there has been less new after-the-fact retaining wall and right-of-way expenditures, and more expired ones.

xii. Reminder that in 2021 the MSB chose not to use 2020 traffic counts. However, traffic was updated in 2022 (with 2021 counts) because the MSB did not take action like they had the previous year. 62 Cities got updated AADT in this year, based on 2021 counts. (only 15 cities had an increase in traffic)

xiii. Briefly reviewed certified complete Cities (90P) account.

IV. Review Street Light Survey

a. Lanoux reviewed the ten-question street light survey sent out to all MSAS cities. There were 79 responses. The MSB requested the survey at their last Spring Meeting. Some of the baseline costs in the survey came from the State Lighting Engineer. Light spacing scenarios, for planning purposes, came from AASHTO.

b. Desrude called for questions about street lighting.

c. Kurtz thanked the NSS and MnDOT staff for the survey work. The survey has good information to make a decision and results show that all cities do street lighting different, but for cities that have street lighting it appears that they are generally focused on the busier streets. Kurtz recommendation, based on the principle of being simple and explainable and defendable, is to make lighting based on AADT groups and likes second scenario that Lanoux presented, which was considered by the NSS back in April. Kurtz questioned where the second lighting needs amount came from?. (why is one cost $100,000, and the second cost $136,800?). Lanoux answered that for the two costs which came from MnDOT (where $142,500 is used for residential and $195,000 for commercial) that the latter cost was 36.8 % higher than the former. So, when the NSS did their scenarios, they applied that same 36.8 % increase to $100,000 to get a second higher cost. Kurtz stated that based on today's costs, a standard light is $7,500. So, for 19 lights per mile that would be $142,500 and 26 lights per mile would be $195,000. Kurtz likes $0 per mile needs for non-existent segments (which is traffic group 1 of 8). For traffic groups 2-4 the lower cost could be used, and for traffic groups 5-8 the higher cost could be used. Lanoux asked if the $7,500 cost a cost would get updated every three years from the MnDOT lighting engineer? Kurtz said it should be and this keeps it fairly simple and defensible.

d. Desrude asked if a new resolution is needed if MSB wants to change street lighting. Lanoux said yes eventually – as the current resolution specifically says Lighting is "$100,000 per mile" so that would trump any updated costs. Desrude read the current street lighting resolution from page 100 of the book.

e. Domras mentioned that lighting is not a state aid requirement but a local choice based on traffic & safety purposes. Should lighting be based on whether a city actually has lighting or not? Domras agrees that non-existent routes should be $0 per mile, but should there be a proration if you don't have lighting on the streets. Desrude mentioned that Domras idea seems more like an after the fact type collection.

f. Kurtz reviewed the history of NSTF discussion on lighting and how it was difficult to define what a lighting system is and the NSTF pushed that discussion to a future MSB. Kurtz acknowledged that after the fact may be the most accurate but is not "simple" and gets away from explainable and defensible.

g. Lanoux mentioned that the thing he has heard the most in his 7 years is keeping it simple is best.

h. Domras asked if after the fact is difficult to track or assess. Lanoux mentioned that he's unsure right now and that the NSS would have to look into that and figure out eligible items and other things. Van Beusekom stated it would be very intense to go and evaluate existing street light systems.

i. Thompson mentioned that after the fact retaining wall and ROW needs aren't too common but reminded the MSB that most survey respondents said that 90% of their system had street lighting.

j. Trowbridge stated that if a change is going to be made that basing it on traffic would be best. Maybe the two lowest traffic groups could be $0 per mile, not just non-existing.

k. Voigt thanked MnDOT and the NSS for looking at this and noted she is a big promoter of keeping it simple. Agreed with Trowbridge on second level not getting lighting Needs. Could entertain idea that cities with AADT in second group could certify them somehow. Agreed with Kurtz on an AADT based system but that it should start at the current $142,000/mile value. Segments are either lit or not lit and lighting costs should be in line with current costs.

l. DeWolf asked if the MSB can get an updated needs calculations run if MSB makes a change? Lanoux responded that we can do updated runs to show the effect of any lighting changes.

m. Nafstad stated that lighting is not SA requirement. Looking at statutes it is limited to lighting hazardous areas. May need to look back at statutes to make sure we are in line.

n. Dombrovski noted that he was leery of an after the fact method due to impact on state aid staff. Supportive of an incremental increase based on traffic and updating numbers as current numbers seem low.

o. Being no further discussion Desrude tabled further discussion to Wednesday.

V. Legislative Update
   a. The legislative committee update was moved to Wednesday.

VI. State Aid Update
   a. No Update

VII. Other discussion topics
   a. Van Beusekom asked if there has been any talk about contractors asking for additional moneys due to supply change delays and contracts getting extended? Bottos stated that normally contracts don't have any material increases other than fuel escalation if included which is not required. State aid recommendation to give more time but not money as it may give the non-low bidders a claim for unfair bidding.

VIII. Call for a motion to adjourn until 8:30 am Wednesday October 26, 2022.
   a. Being no further discussion Desrude called for motion to adjourn.
   b. Motion to adjourn by Trowbridge, second by Erickson, Motion carried 13-0.

   Meeting adjourned.

WEDNESDAY, October 26th, 2022

I. Call to Order by Chair Desrude 8:30 am on Wednesday, October 26th, 2022

II. Legislative Discussion
   a. Culver gave the legislative committee update, specifically noting the following:
      i. Legislative committee has met once and is meeting again this Friday morning to review LMC policy recommendations and also state aid items as well as anything else the committee may have.
      ii. LMC policy documents have been sent out to committee and to Lanoux. Culver encourages everyone to review LMC policy documents and he has highlighted items that should be of interest to City Engineers.
      iii. One item that LMC is silent on is distribution on auto parts sales tax. Currently it is a set dollar amount by statute but that could change by any legislative budget process. House wants money

for transit senate does not, probably going to start from scratch pending outcome of November elections. LMC is silent because that money is coming from general fund so if 100% auto sales tax goes to transportation then that takes away from the general fund and LMC views that as somewhat as a conflict with their other priorities. CEAM needs to be ready to have a position on it and will be competing with transit and small cities/townships.

iv. Culver briefly reviewed the rest of the LMC document and stated that this does not mean these will come up but LMC wants to have a position ready in case they do. Items in red are highlights from Culver. The official mapping item is of interest. LMC is advocating for MnDOT to maintain their ROW to a higher standard. Advocating for more diverse funding sources for transportation.

v. State aid policies include adding a metro engineer to MSB. Adding language to allow funding for historic bridges. Allowing Tribes to apply for funding such as LRIP, SRTS etc.

vi. Culver is planning to schedule a joint meeting with County Engineers to discuss priorities before the session starts, likely in November.

vii. The upcoming session is a budget session so that is the priority. Last year was a traditional bonding session but no bonding bill was passed.

III. Further discussion on Street Lighting Survey & Unit Cost for Lighting

a. Chair Desrude called for any further discussion from the street lighting needs discussion.

b. Voigt proposed a resolution for discussion on the street lighting. Lanoux read the proposed resolution

"Resolved that the first two sentences be revised to:

The unit cost for Street Lighting will be determined using the MSAS Urban ADT group for needs purposes. Non-existent segments shall not collect needs. To determine the Unit Cost for the highest ADT Group, the MNDOT Lighting Engineer shall calculate the cost of a 40-foot pole with standard luminaire including cables, conduit and foundation based on AASHTO Local Commercial Roads, currently 26 lights per mile, the unit cost for the lowest ADT group shall use the Residential spacing, currently 19 lights per mile. The remaining ADT groups will be prorated between the two values. These values have been determined based on a study requested by the Municipal Screening Board in 2022, and will be calculated as part of the 3-year Unit Price Study."

c. Peterson noted that this was good discussion, but doesn't feel strongly one way or another. Playing devil's advocate, can understand why the question was raised due to the unit costs not being raised in years. Looking at the survey results, what jumped out was that 50% of the people didn't want to see a change and that was

pretty evenly spaced based on population. If this is about equity and a move to simplify the needs, the current way is simple.

d. Manchester agreed with Peterson. Agrees with committees' recommendation to stay with $100K/mile.
e. Otteson stated that he thought the survey was on the right track with trying to define a lighting system. First step is to define a lighting system and second step is to assign costs. Also looking at spacing, Big Lake policy is no more than 500' between lights typically around 400" which is about 14-15 lights per mile and Big Lake has some MSA routes with lighting on some and not on others except for where they intersect so how does that work.
f. Desrude asked for any further discussion or direction on the proposed resolution.
g. Kurtz stated that he doesn't know if we need to act on a resolution today. Certainly, wants to move towards AADT scenario and still supports $0 for non-existent. Recommends the MSB send it back to the NSS to better formalize a recommendation and then have state aid run some needs calculations for different scenarios. Makes sense to go to AADT based needs for lighting as it matches the other needs items and is simple and explainable.
h. Otteson responded that he doesn't necessarily agree that AADT is the way to go but should be part of the discussion. Need to look at not only AADT but also design scenarios.
i. Kurtz stated he likes Otteson's idea but it's going to be difficult to have a definition for a lighting system as they are all going to be different from city to city. Data works out that most cities put lighting where the most traffic is but some like St. Paul put them everywhere.
j. Being no further discussion Desrude asked for a motion to send it back to NSS.
    i. **Kurtz made motion to send the review of the lighting needs back to the NSS to look at an AADT group-based recommendation only, and not looking at after the fact or any other items, seconded by Hager. After roll call vote, Motion Carried 12-1 (Nay Theobald)**

IV. Review Tuesday's subjects and <u>take action on specific items</u>

a. Needs recommendations on pages 61 & 62
    i. Desrude called for motion to approve the original letter to the Commissioner on Page 60
    ii. **Motion by Trowbridge to approve the Needs Recommendation Letter to the Commissioner, seconded by Voigt. After roll call vote, Motion Carried 13-0**

b. Research Account Page 82
    i. Desrude called for a motion to approve *to approve the following resolution*:

<u>Be it resolved that an amount of $1,099,699 (not to exceed ½ of 1% of the 2022 MSAS Apportionment sum of $219,939,850) shall be set aside</u>

from the 2023 Apportionment fund and be credited to the research account.

ii. **Motion by Erickson to approve the resolution regarding the research account as read, seconded Hager. After roll call vote, Motion Carried 13-0**

V. Other Discussion Topics
   a. None

VI. Closing Remarks from Chair
   c. Desrude thanked all Screening Board members:
   d. Desrude thanked the three outgoing board members *Peterson, Domras, and Erickson*
   e. Desrude wished Paul Kurtz & Julie Dresel best of in retirement. Kurtz said this is his 42nd MSB meeting and got to sit on the NSTF and got to learn a lot about state aid. Kurtz thanked Van Beusekom for all his work over the years and mentioned this is his favorite four days of the year. Dresel said her job is a great job if anyone is interested. Desrude thanked Dresel for being a great advocate for Cities.

VII. Next Spring Screening Board
   a. Desrude noted the next Screening Board Meeting is May 23-24, 2023, at a location to be determined.

VIII. Expense Reports
   a. Desrude reminded the MSB about the expense reports.

IX. Adjourn
   a. Being no further discussion, Desrude called for motion to adjourn at 9:10 am.
   b. Motion to adjourn by Voigt, seconded by Trowbridge. Motion Carried 13-0.

Meeting adjourned at 9:10 am

Respectfully submitted,

_____

Mark DuChene, PE
Municipal Screening Board Secretary
Faribault City Engineer

TRAFFIC COUNTING &
ADT GROUPS

http://www.dot.state.mn.us/traffic/data/tma.html

MSAS URBAN ADT GROUPS FOR NEEDS PURPOSES

Quantities Based on a One Mile Section

EXISTING ADT	NEEDS WIDTH	NEEDS GENERATION DATA	GRADING DEPTH (inches)	GRADING QUANTITY (cubic yards)	CLASS 5 GRAVEL BASE DEPTH (inches)	CLASS 5 GRAVEL BASE QUANTITY (Tons)	TOTAL BITUMINOUS QUANTITY (TONS)
0 EXISTING ADT & NON EXISTING	**26 FOOT ROADBED WIDTH**	2- 11' TRAFFIC LANES 0 PARKING LANES 2- 2' CURB REACTION	22 INCHES	**11,655**	6 INCHES	**4,346**	**2,917** 4 INCHES
1-499 EXISTING ADT	**28' FOOT ROADBED WIDTH**	2- 12' TRAFFIC LANES 0 PARKING LANES 2- 2' CURB REACTION	22 INCHES	**12,496**	6 INCHES	**4,691**	**3,182** 4 INCHES
500-1999 EXISTING ADT	**34 FOOT ROADBED WIDTH**	2- 12' TRAFFIC LANES 1- 8' PARKING LANE 1- 2' CURB REACTION	26 INCHES	**17,698**	10 INCHES	**10,176**	**3,978** 4 INCHES
2000-4999 EXISTING ADT	**40 FOOT ROADBED WIDTH**	2-12' TRAFFIC LANES 2- 8' PARKING LANE	32 INCHES	**25,188**	16 INCHES	**19,628**	**4,773** 4 INCHES
5000-8999 EXISTING ADT	**48 FOOT ROADBED WIDTH**	4-11' TRAFFIC LANES 2- 2' CURB REACTION	35 INCHES	**32,795**	19 INCHES	**27,907**	**5,834** 4 INCHES
9000-13,999 EXISTING ADT	**54 FOOT ROADBED WIDTH**	4-11' TRAFFIC LANES 1- 8' PARKING LANE 1- 2' CURB REACTION	36 INCHES	**37,918**	19 INCHES	**31,460**	**8,287** 5 INCHES
14,000-24,999 EXISTING ADT	**62 FOOT ROADBED WIDTH**	4-11' TRAFFIC LANES 1- 14' CENTER TURN 2- 2' CURB REACTION	38 INCHES	**45,838**	20 INCHES	**38,049**	**11,535** 6 INCHES
GT 25,000 EXISTING ADT	**70 FOOT ROADBED WIDTH**	6-11' TRAFFIC LANES 0 PARKING LANES 2- 2' CURB REACTION	39 INCHES	**53,172**	21 INCHES	**44,776**	**13,126** 6 INCHES

Roadway Segment Information

Status : Original

City Name : EDINA **Segment Nbr : 120-142-010**

Original		Current
WEST 54TH STREET	Street Name	WEST 54TH STREET
WOODDALE AVE TO FRANCE AVE	Termini	WOODDALE AVE TO FRANCE AVE
0.5	Length	0.5
Improved	Existing Roadway Type	Improved
Undivided	Existing Lane Description	Undivided
1	Existing Number of Signal Legs	1
2250	Present AADT	2250
4 (2000 - 4999)	Traffic Group Code	4 (2000 - 4999)
2017	Year of AADT Count	2017
N	Common Boundary Designation	N
N	Turnback Mileage	N
N	Outside City Limit	N
	Year of Latest SA Fund	
	Comments	
	Segment Override	

Bridge Information

Status: Original

Original		Current
90640	Structure Number	90640
0.25	Milepoint	0.25
MINNEHAHA CREEK	Feature Crossed	MINNEHAHA CREEK
61	Structure Length	61
1914	Year Built	1914
	Comments	
BRIDGE	Bridge Type	BRIDGE
4 (2000 - 4999)	Bridge Group	4 (2000 - 4999)

Segment Cost Information

segment length — quantity ADT chart — Unit Cost

Cost Factor	Unit Cost	Computation Formula or Rule	Equation	Result
Gravel	MSAS Gravel Cost Group 4	Length * Quantity * UnitCost	0.5 * 19628 * 19.33	$189,705
Bituminous	MSAS Bituminous Cost Group 4	Length * Quantity * UnitCost	0.5 * 4773 * 77.33	$184,548
Excavation	MSAS Excavation Cost Group 4	Length * Quantity * UnitCost	0.5 * 25188 * 11.43	$143,949
Storm Sewer	MSAS Storm Sewer Cost Group 4	Length * UnitCost	0.5 * 225900	$112,950
Sidewalk	MSAS Sidewalk Cost Group 4	Length * UnitCost * FeetPerMile * SidewalkWidth	0.5 * 7.78 * 5280 * 10	$205,392
Street Lighting	MSAS Street Lighting Cost Group 4	Length * UnitCost	0.5 * 100000	$50,000
Curb and Gutter	MSAS Curb And Gutter Cost Group 4	Length * UnitCost * FeetPerMile * NumberOfCurbs	0.5 * 21.48 * 5280 * 2	$113,414
Signal Leg	MSAS Traffic Signals Cost Group 4	NumOfSignals * UnitCost / 4	1 * 249034 / 4	$62,259
Bridge	MSAS Bridge TGC Group 4	BridgeLength * NeedsWidth * UnitCost	61 * 40 * 98.58	$240,535
Engineering Cost		Percent of costs	1302752 * 0.220	$286,605
Total				$1,589,357

Subcommittee Meetings

NEEDS STUDY SUBCOMMITTEE MEETING MINUTES

The Needs Study Subcommittee meeting was held at 1:00 pm on April 6, 2023. NSS members present were Jay Owens (Red Wing/Chair), Chad Millner (Edina), and Adam Nafstad (Albertville). Also in attendance from State Aid were Bill Lanoux and Naomi Eckerd.

A 2023 Needs Study Subcommittee report was sent to all attendees prior to the meeting. Before making their Unit Cost recommendations, the group reviewed the committee's role as stated in MN Statute 162.13 and in resolutions of the Municipal Screening Board. Other housekeeping items discussed were the significance of ADT, and a review of the minutes of the NSS meeting in 2022.

At their 2022 Fall Screening Board meeting, the MSB sent an item to the NSS for review. They would like this committee to review Street Lighting Needs and make an AADT group-based recommendation to change how street lighting Needs are calculated.

For 2023, most recommendations will be based off an inflation factor. The Construction Cost Index (CCI) published by the Engineering News Record provides the basis of Unit Cost recommendations. The CCI used for 2022 is 5.6%. The NSS made recommendations for the following items.

Grading/Excavation: Price used in 2022 Needs - $11.43 Cu. Yd.
Committee's Recommendation for 2023 Needs - $12.07 Cu. Yd.

Aggregate Base: Price used in 2022 Needs - $19.33 Ton
Committee's Recommendation for 2023 Needs - $20.41 Ton

All Bituminous: Price used in 2022 Needs - $77.33 Ton
Committee's Recommendation for 2023 Needs - $81.66 Ton

Committee members discussed some bituminous prices they had been seeing in their area, with projects typically costing over 90 dollars per ton, but since costs can vary across the state, members were comfortable with the recommended cost of $81.66. We have a full unit cost study due next year and committee members think this cost will likely go up to 90-plus in 2024.

Millner asked Lanoux about next year's Unit Cost Study and asked how many years of data we use. Lanoux said that for most items we will be looking at just one year of project data (2023). He said that typically provides enough data and keeps the costs current, and not averaged down with older data. Lanoux did add that structures use a five-year average and that helps keep structure costs from fluctuating too much.

Sidewalk: Price used in 2022 Needs - $7.78 Sq. Ft.
Committee's Recommendation for 2023 Needs - $8.22 per Sq. Ft.

The Sidewalk graph shows significant increases in this cost the last few years. Increasing concrete costs and ADA requirements were noted as reasons why. Committee was good with cost of $8.22.

Curb and Gutter: Price used in 2022 Needs - $21.48 Lin. Ft.
Committee's Recommendation for 2023 Needs - $22.68 Lin. Ft.

Committee felt price of $22.68 was possibly a little high but didn't round it down because costs can vary across the state. Unit cost study next year might level this one off a bit.

Structures: Price used in 2022 Needs - $98.58 Sq. Ft.
Committee's Recommendation for 2023 Needs - $105.74 Sq. Ft

Recommendation is based on one-half of the five-year average of bridge costs using data provided by the MnDOT State Aid Bridge Office The price last year ($98.58) was an increase of 8.7% from previous year. For 2023, we're up another 7.3% to $105.74. Lanoux commented that two years ago we saw a slight decline because a year of high costs came off the five-year average. This year, 2018 data (a lower cost year) came off the five-year average. Individual years for structures have been increasing in recent years, and for this year's data alone the unit cost would have been $115.84. The 5-year average keeps this cost from fluctuating too much and should steadily increase going forward. The committee is good with $105.74 Sq. Ft.

Storm Sewer: The MnDOT Hydraulics Unit performs an analysis of storm sewer every 3 years. This year, we are applying the inflation factor of 5.6%. Costs are $462,147 for new construction, and $134,829 for adjustments to existing systems. This is an average of $298,488 per mile. Committee makes recommendation for the highest of eight sections.
Committee's Recommendation for 2023 Needs - $298,500 per mile
The recommendation of $298,500 per mile is for a 70-foot section. The cost per mile is prorated down through the other seven ADT groups.

Engineering: Price used in 2022 Needs – 22%
Committee's Recommendation for 2023 Needs – 22%

Traffic Signals: Price used in 2022 Needs - $249,034 Per Signal
Committee's Recommendation for 2023 Needs - $262,980 Per Signal

The SALT program Engineer provides highlights for a signal study every 3 years. This year's recommendation is based off the inflation factor.

Street Lighting: Price used in 2022 Needs - $100,000 per mile
No Committee Recommendation for 2023 yet

The Committee has been tasked with changing this unit cost and coming up with an AADT based way of calculating Street Lighting Needs. Current MSB resolutions say that Street Lighting will be determined by multiplying $100,000 per mile, for all segments. So this resolution will have to change as well.

Lanoux shared information he received from the State Lighting Engineer last year. General assumptions are that "residential roads" have 19 light fixtures per mile and "commercial roads" have 26 light fixtures per mile. A standard pole/luminaire cost, for planning purposes was at least $7500/pole. So, for estimating & planning purposes (and a more current cost of lighting) local commercial lighting would be approximately $195,000/mile and the local residential would be $142,500/mile. These are the baseline costs we are using for different AADT scenarios. (note: that on a follow-up email Lanoux had with the State Lighting Engineer this spring, costs have already gone up since last year, with the Metro district using $10,000 per pole for estimates)

Prior to the NSS meeting, State Aid prepared several AADT based scenarios for the NSS to review. For each Scenario – the NSS reviewed how each one would affect the distribution to each city. There are 8 traffic groups used in the Needs calculations: They are as follows: TG#1, Zero traffic (non-existing routes); TG#2, 1-499; TG#3, 500-1999; TG#4, 2000-4999; TG#5, 5000-8999; TG#6, 9000-13999; TG#7, 14000-24999, TG#8, 25000 or more. Here are the scenarios reviewed by the NSS during the meeting:

1) *keep current method of $100,000 per mile, for all traffic groups (no change)*
2) *get rid of lighting altogether (so apply $0 per miles for all segments)*
3) *TG1: $0 per mile; TG2 to TG4: $142,000 per mile; TG5 to TG8: $195,000 per mile.*
4) *TG1 to TG2: $0 per mile; TG3 to TG4: $142,000 per mile; TG5 to TG8: $195,000 per mile.*
5) *TG1 to TG2: $0 per mile; TG3 to TG4: $71,250 per mile; TG5 to TG8: $95,500 per mile (costs cut in half)*
6) *TG1: $0 per mile; TG2 $71,250; TG 3 to TG4: $142,000 per mile; TG5 to TG8: $195,000 per mile.*
7) *TG1: $0 per mile; TG2 $36,625; TG 3 to TG4: $71,250 per mile; TG5 to TG8: $97,500 per mile.*

Prior to reviewing results, Lanoux showed a color map that's displayed in many of the Fall Needs reports: "Map: Needs Costs per mile for all State Aid cities". In this map, typically the more urban type cities draw more Total Needs per mile. He believes it is the intent of the Screening Board is that lighting would look somewhat similar and reflect this trend, as most Needs items increase with traffic. If we had a map of "Lighting Needs per mile" it would have all cities looking the same, as it's a flat cost.

Lanoux mentioned that in previous committee / screening board meetings, most people seemed in agreement that non-existing routes (TG#1) shouldn't draw lighting Needs. It's also been suggested by some that TG#2 (AADT 1-499) possibly not draw lighting needs either, or less needs? This is a weird group and seems to carry a lot of weight in the calculations, probably because most urban cities don't have AADT in this range. State Aid looked at 25 random roadways in this range and found that more than half had some level of lighting, but the lighting wasn't always elaborate/extensive. Some scenarios we ran gave this traffic group no lighting needs, or a little less than TG 3 and 4.

Owens commented that within each traffic group there will be variation on how much lighting there actually is. Somewhere there's a low volume road with decorative lighting, and somewhere there's a high traffic road with no lighting.

Review of scenarios: (for each scenario we distributed the 2023 Money Needs apportionment of $107,584,512)

#1) keeping $100,000 mile shows what every city gets in the current method.

#2) getting rid of lighting has significant effect, because removing Lighting as a Needs item also changes engineering (22% of everything) and Lighting is a bigger % of the Needs for cities with more low volume roads. Removing Lighting takes more overall Needs away from these cities than it does more urban cities. The city that lost the most in this scenario loses $16,700, in distribution, (or -1.4% of their needs). The city that gains the most gains $96,800 or a 1.3% increase of their needs. (Of all the scenarios looked at – this one tipped the most money back to the bigger cities)

#3) when sorting this scenario, the rankings aren't quite like rankings for Total Needs, as not all big cities are the biggest winners, but percentage wise this method has the least impact in gainers/losers. In this scenario, note that TG 2 is getting the same Lighting Needs as TG3 & TG4.

#4) This one is okay. City that loses the most loses $26,900 in distribution (-4.0% loss I Needs), biggest gainer is $30,600 (+0.4%)

#5) this one is okay. City that loses the most loses $21,200 in distribution (-3.2%), biggest gainer is $62,587 (+0.8%)

#6) this one somewhat works, but some bigger cities (with more overall Needs) lose out. Lanoux notes that in this scenario, TG 2 draws $71,250, (half the residential cost), while TG 3 & 4 draw the full residential cost.

#7 result looks good. Similar method to #6, except all costs from #6 are cut in half. (note that TG #2 gets one-fourth the residential cost, then the higher groups get either one-half the residential or commercial cost. City that loses the most loses $16,700 in distribution (-1.8%), biggest gainer is $52,400 (+0.7%).

The NSS gave consideration to the scenarios. # 7 looks good, but there was some conversation/concern about cutting costs in half – and can we defend that? Lanoux said structures are cut in half, with the reason (from the Needs Study Task Force) being that structures have other sources of funding and shouldn't be a big % of the Needs. Could lighting be similar? Lower costs make an item a smaller percentage of the Needs and also reduces the swings in gainers / losers. Maybe lighting should be a smaller percentage since it such a variable and optional item that's difficult to get exactly right? Scenario #7 makes lighting just under 3% of the total Needs – and ultimately the Needs is just a way to distribute money and we're trying to show there's a need for Lighting and have it in the calculations.

We don't want to play with the costs to get a result that looks right. Cost choices should be defendable.

The NSS would like more discussion on this this item. They asked State Aid for a few more scenarios. One idea is we try something similar to what's done with the eight sections of storm sewer. Perhaps Make the Commercial lighting cost ($195,000) the unit cost for TG 8 – then prorate down thru the lower groups to zero?

State Aid will run more scenarios with this method and the NSS will meet again in a few weeks.

The meeting was adjourned.

Minutes submitted by Chad Millner

NEEDS STUDY SUBCOMMITTEE MEETING #2 MINUTES

The Needs Study Subcommittee's 2nd meeting was held at 12:10 pm on April 18, 2023. NSS members present were Jay Owens (Red Wing/Chair), Chad Millner (Edina), and Adam Nafstad (Albertville). Also in attendance from State Aid were Bill Lanoux and Naomi Eckerd.

The committee continued their discussion of Street Lighting. State Aid prepared additional AADT based scenarios for the committee to review. The scenarios reviewed were:

1) *(Scenario #8 ran by State Aid) For the 8 traffic Groups, the highest Traffic Group will get a cost of $195,000 per mile (our base commercial cost), then prorate cost downward in equal Increments to Traffic Group 5. Then reset the cost for Traffic Group 4 at $142,500 per mile (our base residential cost), then prorate downward again in equal increments to Zero dollars for Traffic Group 1. Therefore: TG1: $0 per mile; TG2: $47,500 per mile; TG3: $95,000 per mile; TG4: $142,500 per mile; TG5: $155,625 per mile; TG6: $168,750 per mile; TG7: $181,875 per mile; TG8: $195,000 per mile.*

2) *(Scenario #10) For the 8 traffic Groups, Traffic Group 8 will get a cost of $195,000 per mile (our base commercial cost), then prorate downward, in equal Increments, all the way to Traffic Group 1 at $0 per mile. Therefore: TG1: $0 per mile; TG2: $27,857 per mile; TG3: $55,714 per mile; TG4: $83,571 per mile; TG5: $111,429 per mile; TG6: $139,286 per mile; TG7: $167,143 per mile; TG8: $195,000 per mile.*

Both scenarios have a straightforward approach that's easy to administer, and we're using costs we can get from a source. Since Scenario #8 resets the cost at traffic group 4, it does give a little more Needs value to the lower traffic groups.

Review: (for each scenario we distributed the 2023 Money Needs apportionment of $107,584,512)

#1) (Scenario 8) City that loses the most loses $22,383 (-3.3% loss in Needs), biggest gainer is $37,030 (+0.5%)

#2) (Scenario 10) City that loses the most loses $21,916 in distribution (-3.3% loss I Needs), biggest gainer is $71,642 (+0.9%)

The results are very similar. Lanoux thought that results when ranked were similar to other needs items based on traffic. One committee member thought Scenario 10 might be easier to defend because it uses just one unit cost and is easier to explain. Another committee member liked the results of Scenario 8 a little better, as the swings were less and a few more cities gained due to the lower traffic groups getting more value.

The committee had more conversation on the concept being applied. They reviewed the chart for MSAS URBAN ADT Groups and looked at assumptions in each category that drive the Needs calculations. For each group there are different figures for roadbed width, traffic lanes, parking lanes, and curb reaction. While these assumptions work well for items like bituminous, excavation, and gravel base Needs – are they safe assumptions to use for calculating lighting? – (which we already noted can vary regardless of AADT). Bottom line: street lighting isn't like other unit cost items. The committee reconsidered their approach as they felt it was getting difficult to justify increasing the cost for every traffic group. Also difficult is defending a Needs loss for cities that may actually have lighting on low volume roads.

The committee noted that ADT at 5000-plus (starting with TG#5) was where traffic lanes change from 2 to 4 lanes on the ADT chart. They thought traffic lanes were a defendable measure to have an increase in the street lighting cost. The committee went back to review a scenario from the first meeting - Scenario 3: TG1: $0 per mile; TG2 to TG4: $142,000 per mile; TG5 to TG8: $195,000 per mile. When you sort this scenario by % change, this scenario has the smallest swings in gainers / losers. It also seems easy to defend and makes the least assumption that low volume roads have less street lighting cost than higher volume roads. Of the Scenarios presented over two meetings, the NSS likes Scenario #3.

RECOMMENDATION.

The Needs Study Subcommittee recommends that the unit cost for street lighting shall be calculated as follows.

Traffic Group 1: $0 per mile

Traffic Group 2: $142,500 per mile

Traffic Group 3: $142,500 per mile

Traffic Group 4: $142,500 per mile

Traffic Group 5: $195,000 per mile

Traffic Group 6: $195,000 per mile

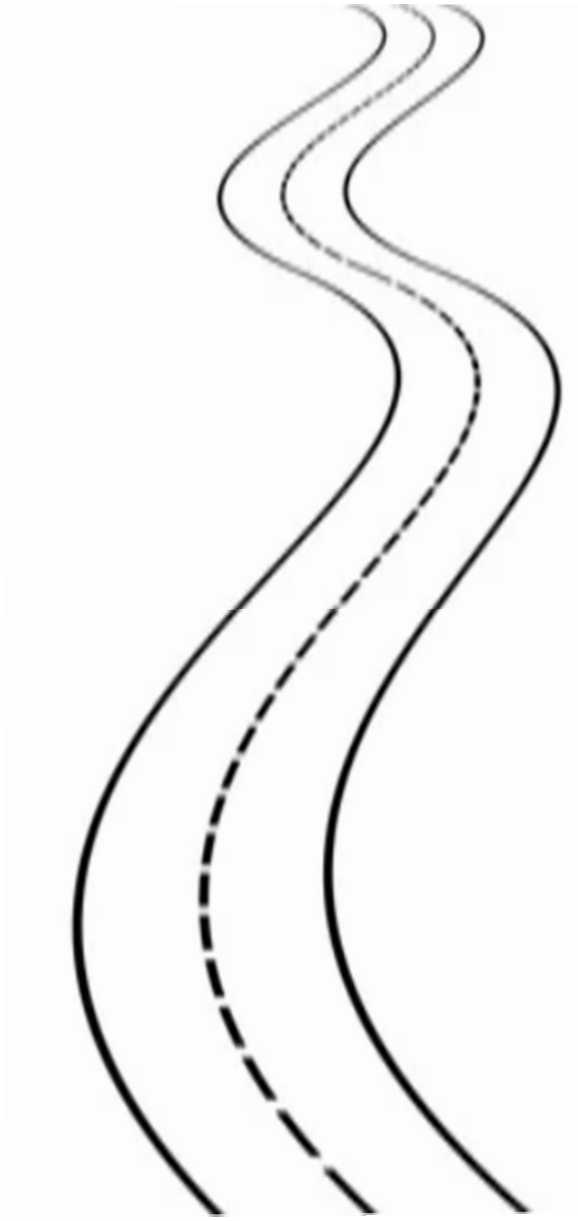
Traffic Group 7: $195,000 per mile

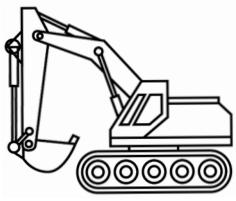
Traffic Group 8: $195,000 per mile

These Unit Costs will remain until The Municipal Screening Board requests a study on this item on any year it is deemed necessary.

The meeting was adjourned.

Minutes submitted by Chad Millner





UNIT PRICES

AND GRAPHS

UNIT PRICE STUDY – History & Introduction

HISTORY

An annual unit price study was conducted until 1997. At the end of 1996, the Municipal Screening Board made a motion to conduct the Unit Price study every two years, with the ability to adjust significant unit price changes on a yearly basis.

In 1999 and 2001, a construction cost index was applied to the 1998 and 2000 contract prices.

In 2003, the Screening Board directed the Needs Study Subcommittee to use the percent of increase in the annual National Engineering News Record Construction Cost Index to recommend Unit Costs to the Screening Board.

In 2007, the Municipal Screening Board made a motion to conduct the Unit Price study *every three years* with the option to request a Unit Price study on individual items in off years.

In 2024 we will be conducting the next full unit cost study based on 2023 project costs.

THIS YEAR

At the end of 2022, the Engineering Construction Cost Index was 5.6%. Applying this inflation factor to last year's MSB approved Unit Prices for *Excavation, Aggregate Base, Bituminous, Sidewalk Construction, Curb & Gutter Construction, and Traffic Signals* will provide the basis of these unit cost recommendations.

State Aid bridge costs from the last 5 years (2018 to 2022), will be used to determine the unit price for structures. This five-year average, divided by two, provides the basis for the structure cost recommendation.

MN/DOT's hydraulic office has annually recommended costs for storm sewer construction & adjustments. Last year, the hydraulics office moved to the same triennial cycle that we follow for the Unit Cost Study. They now provide a full storm sewer study every three years and apply the CCI inflation factor in off years.

CONSTRUCTION ECONOMICS

ENR's 20-city average cost indexes, wages and materials prices. Historical data for ENR's 20 cities can be found at ENR.com/economics

Construction Cost Index

ANNUAL INFLATION RATE

+5.6% DEC. 2022

1913=100	INDEX VALUE	MONTH	YEAR
CONSTRUCTION COST	13175.00	0.0%	+5.6%
COMMON LABOR	24634.46	0.0%	+1.1%
WAGE $/HR.	47.36	0.0%	+1.1%

The Construction Cost Index's annual escalation rose 5.6%, while the monthly component stayed flat.

Building Cost Index

ANNUAL INFLATION RATE

+9.4% DEC. 2022

1913=100	INDEX VALUE	MONTH	YEAR
BUILDING COST	7971.96	+0.1%	+9.4%
SKILLED LABOR	11320.21	+0.1%	+2.4%
WAGE $/HR.	62.47	+0.1%	+2.4%

The Building Cost Index was up 9.4% on an annual basis, while the monthly component rose 0.1%.

Materials Cost Index

MONTHLY INFLATION RATE

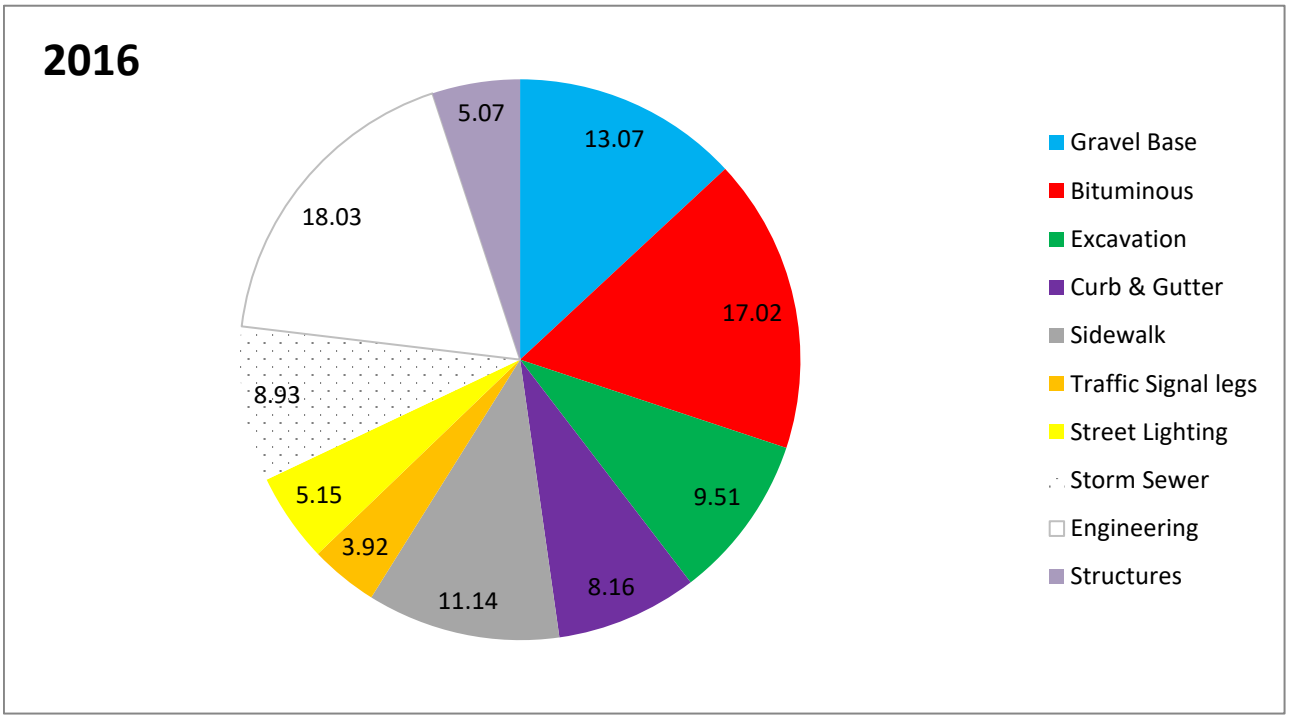
-0.1% DEC. 2022

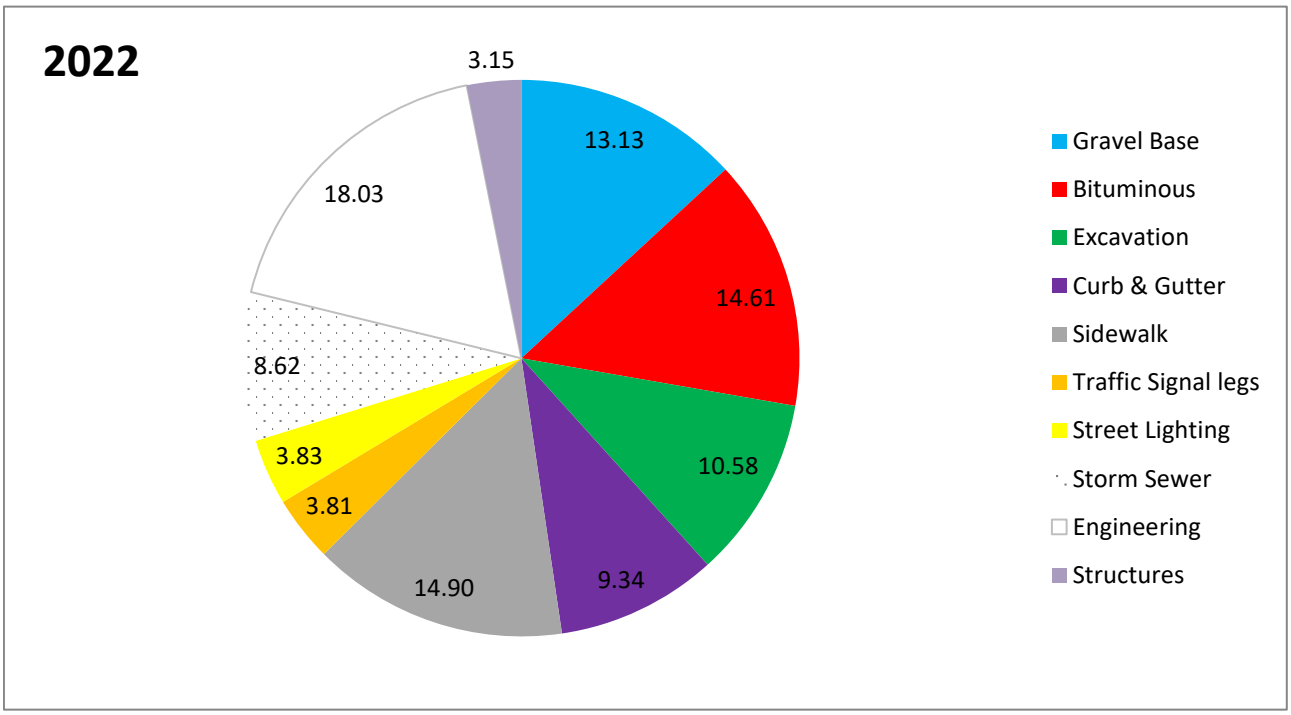
1913=100	INDEX VALUE	MONTH	YEAR
MATERIALS COST	5889.91	-0.1%	+18.6%
CEMENT $/TON	174.09	+0.8%	+14.4%
STEEL $/CWT	92.00	-1.0%	+20.2%
LUMBER $/MBF	1094.73	+0.6%	+15.0%

The MCI fell 0.1% last month, while the annual escalation rate increased 18.6%.

PERCENTAGE OF NEEDS FOR UNIT COST ITEMS

for 2016 and 2022





Annual Percentage Change of Unit Costs, 2010 - 2023

sidewalk	$	$	% Change
from 2010 to 2011	$3.09	$3.18	**2.9**
from 2011 to 2012	$3.18	$3.17	**-0.3**
from 2012 to 2013	$3.17	$3.25	**2.5**
from 2013 to 2014	$3.25	$3.50	**7.7**
from 2014 to 2015	$3.50	$4.25	**21.4**
from 2015 to 2016	$4.25	$4.35	**2.4**
from 2016 to 2017	$4.35	$4.75	**9.2**
from 2017 to 2018	$4.75	$5.50	**15.8**
from 2018 to 2019	$5.50	$5.66	**2.9**
from 2019 to 2020	$5.66	$5.76	**1.8**
from 2020 to 2021	$5.76	$7.24	**25.7**
from 2021 to 2022	$7.24	$7.78	**7.4**
from 2022 to 2023	$7.78	$8.22	***5.6***

curb & gutter			
from 2010 to 2011	$11.00	$11.30	**2.7**
from 2011 to 2012	$11.30	$11.15	**-1.3**
from 2012 to 2013	$11.15	$11.45	**2.7**
from 2013 to 2014	$11.45	$11.75	**2.6**
from 2014 to 2015	$11.75	$13.75	**17.0**
from 2015 to 2016	$13.75	$14.00	**1.8**
from 2016 to 2017	$14.00	$14.55	**3.9**
from 2017 to 2018	$14.55	$15.90	**9.3**
from 2018 to 2019	$15.90	$16.36	**2.9**
from 2019 to 2020	$16.36	$16.65	**1.8**
from 2020 to 2021	$16.65	$20.00	**20.1**
from 2021 to 2022	$20.00	$21.48	**7.4**
from 2022 to 2023	$21.48	$22.68	***5.6***

grading/excavtion			
from 2010 to 2011	$4.90	$5.05	**3.1**
from 2011 to 2012	$5.05	$6.60	**30.7**
from 2012 to 2013	$6.60	$6.75	**2.3**
from 2013 to 2014	$6.75	$7.00	**3.7**
from 2014 to 2015	$7.00	$7.50	**7.1**
from 2015 to 2016	$7.50	$7.65	**2.0**
from 2016 to 2017	$7.65	$7.95	**3.9**
from 2017 to 2018	$7.95	$9.10	**14.5**
from 2018 to 2019	$9.10	$9.36	**2.9**
from 2019 to 2020	$9.36	$9.53	**1.8**
from 2020 to 2021	$9.53	$10.64	**11.6**
from 2021 to 2022	$10.64	$11.43	**7.4**
from 2022 to 2023	$11.43	$12.07	***5.6***

aggregate base	$	$	% Change
from 2010 to 2011	$10.10	$10.40	**3.0**
from 2011 to 2012	$10.40	$10.65	**2.4**
from 2012 to 2013	$10.65	$10.90	**2.3**
from 2013 to 2014	$10.90	$11.25	**3.2**
from 2014 to 2015	$11.25	$14.00	**24.4**
from 2015 to 2016	$14.00	$14.30	**2.1**
from 2016 to 2017	$14.30	$14.90	**4.2**
from 2017 to 2018	$14.90	$13.78	**-7.5**
from 2018 to 2019	$13.78	$14.18	**2.9**
from 2019 to 2020	$14.18	$14.44	**1.8**
from 2020 to 2021	$14.44	$18.00	**24.7**
from 2021 to 2022	$18.00	$19.33	***7.4***
from 2022 to 2023	$19.33	$20.41	***5.6***

all bituminous			
from 2010 to 2011	$56.75	$60.00	**5.7**
from 2011 to 2012	$60.00	$58.00	**-3.3**
from 2012 to 2013	$58.00	$59.50	**2.6**
from 2013 to 2014	$59.50	$61.25	**2.9**
from 2014 to 2015	$61.25	$65.50	**6.9**
from 2015 to 2016	$65.50	$66.80	**2.0**
from 2016 to 2017	$66.80	$69.60	**4.2**
from 2017 to 2018	$69.60	$60.00	**-13.8**
from 2018 to 2019	$60.00	$65.00	**8.3**
from 2019 to 2020	$65.00	$66.17	**1.8**
from 2020 to 2021	$66.17	$72.00	**8.8**
from 2021 to 2022	$72.00	$77.33	**7.4**
from 2022 to 2023	$77.33	$81.66	***5.6***

structures			
from 2010 to 2011	$120.00	$115.00	**-4.2**
from 2011 to 2012	$115.00	$125.00	**8.7**
from 2012 to 2013	$125.00	$120.00	**-4.0**
from 2013 to 2014	$120.00	$72.00	**-40.0**
from 2014 to 2015	$72.00	$96.50	**34.0**
from 2015 to 2016	$96.50	$120.00	**24.4**
from 2016 to 2017	$120.00	$90.00	**-25.0**
from 2017 to 2018	$90.00	$87.55	**-2.7**
from 2018 to 2019	$87.55	$95.20	**8.7**
from 2019 to 2020	$95.20	$95.67	**0.5**
from 2020 to 2021	$95.67	$90.70	**-5.2**
from 2021 to 2022	$90.70	$98.58	**8.7**
from 2022 to 2023	$98.58	$105.74	***7.3***

*Underlined years are years of a Full Unit Cost Study. (blue shows tenative prices for 2023).

Since 2014 cost for structures have been calculated by dividing the contract price by 2.

Since 2018 cost for structures have been based on a five year average contract price that is divided by 2.

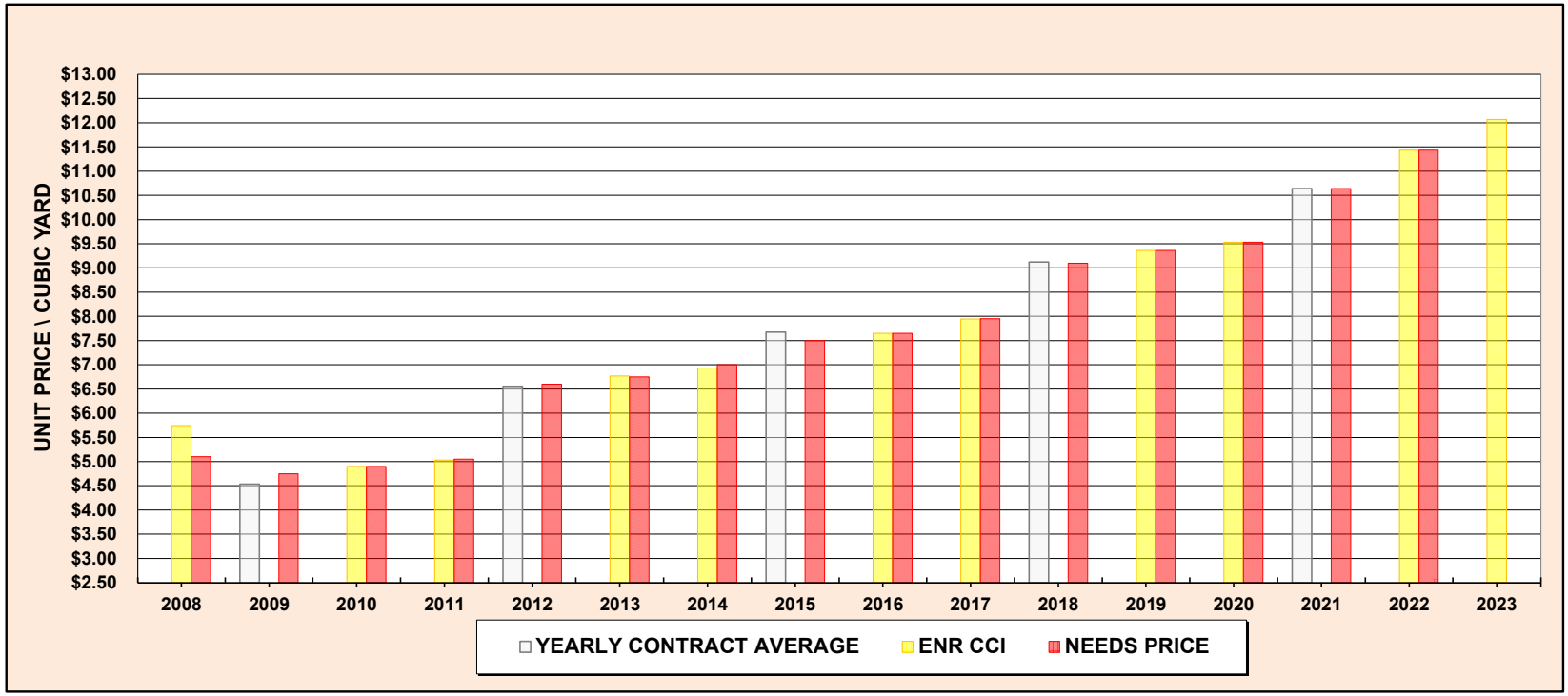
2023 UNIT PRICE RECOMMENDATIONS

for the January 2024 distribution

Needs Item		2022 MSB Approved Prices for the 2023 Distribution	5.6% ENR Construction Cost Index for Dec. 2022	2023 NSS Recommended Prices for 2024 Distribution	2023 MSB Approved Prices for the 2024 Distribution
Grading (Excavation)	Cu. Yd.	$11.43	$12.07	**$12.07**	
Aggregate Base	Ton	19.33	20.41	**20.41**	
All Bituminous	Ton	77.33	81.66	**81.66**	
Sidewalk Construction	Sq. Ft.	7.78	8.22	**8.22**	
Curb and Gutter Construction	Lin.Ft.	21.48	22.68	**22.68**	
Traffic Signals	Per Sig	249,034	262,980	**262,980**	
Street Lighting	Mile	100,000	NA	142,500-195,000	
Engineering	Percent	22	NA	**22**	
All Structures (includes both bridges and box culverts)					
	Sq. Ft.	98.58	NA	**105.74**	
Storm Sewer (based on ADT)	Per Mile				
0 ADT & Non Existing		199,400	210,500	**210,500**	
1-499		203,200	214,500	**214,500**	
500-1,999		214,500	226,500	**226,500**	
2,000-4,999		225,900	238,500	**238,500**	
5,000-8,999		241,000	254,500	**254,500**	
9,000-13,999		252,400	266,500	**266,500**	
14,000-24,999		267,600	282,500	**282,500**	
25,000 and over		282,700	298,500	**298,500**	

N:\MSAS\Books\June 2023 Book\UNIT PRICE RECOMMENDATIONS.XLXS

GRADING/EXCAVATION



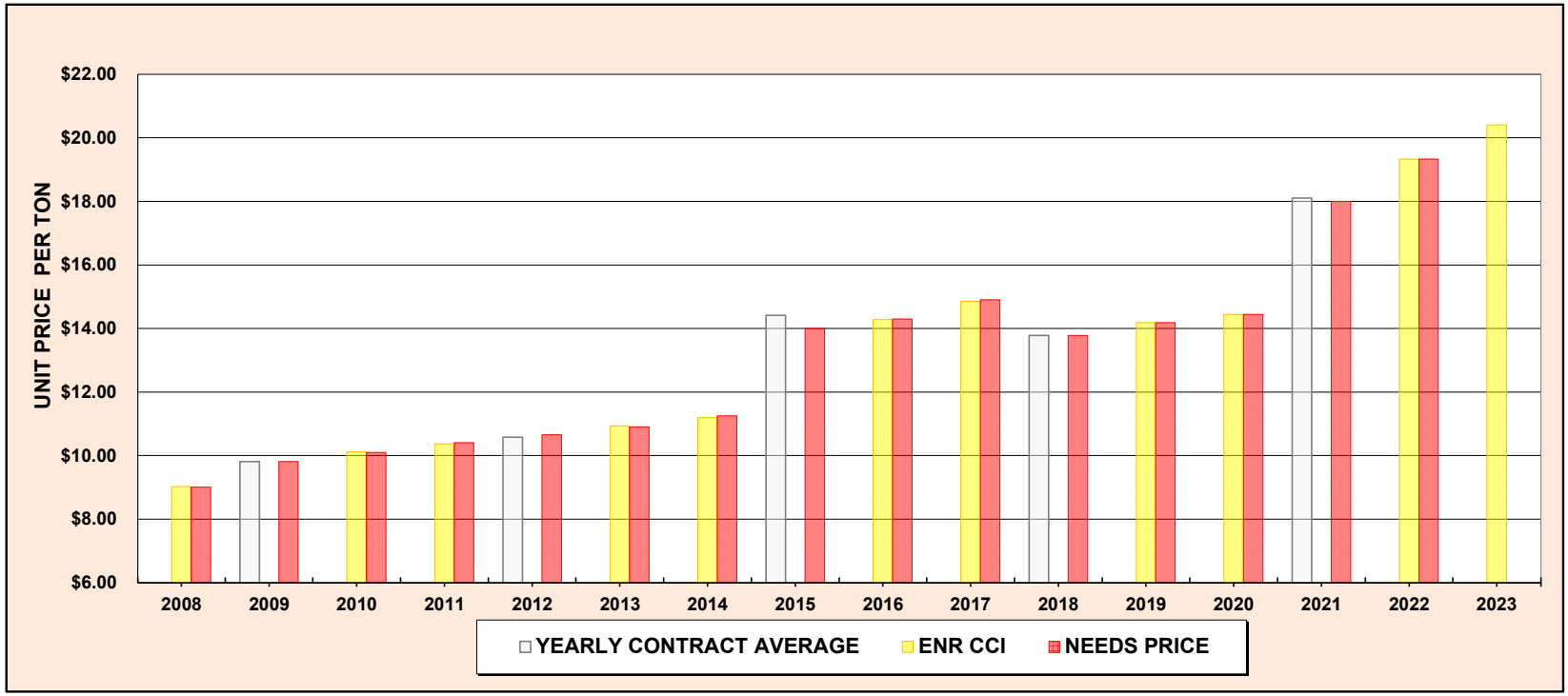
Needs Year	Number of Cities	Quantity (Cu.Yd)	Total Cost	Yearly Average Contract Price	Engineering News Record Construction Cost Index	Price Used in Needs
2008					$5.74	$5.10
2009	47	1,334,769	$6,052,005	4.53		4.75
2010					4.90	4.90
2011					5.03	5.05
2012	56	689,502	4,521,435	6.56		6.60
2013					6.77	6.75
2014					6.93	7.00
2015	40	472,486	3,627,575	7.68		7.50

Needs Year	Number of Cities	Quantity (Cu. Yd.)	Total Cost	Yearly Average Contract Price	Engineering News Record Construction Cost Index	Price Used in Needs
2016					7.65	$7.65
2017					7.95	7.95
2018	56	434,347	$3,959,719	$9.12		9.10
2019					9.36	9.36
2020					9.53	9.53
2021	61	902,417	9,603,418	$10.64		10.64
2022					11.43	11.43
2023					12.07	

SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 2023 NEEDS STUDY IS $12.07 PER CUBIC YARD

Applying the ENR CCI of 5.6% to last year's "Price used in Needs" of $11.43 results in an increase to $12.07 (+$0.64)
Since 2016, this Unit Cost has increased by an average of $0.63 (note the $1.11 increase in last UC study)
(Inflation Factor results in a 2023 cost of $12.07)

AGGREGATE BASE

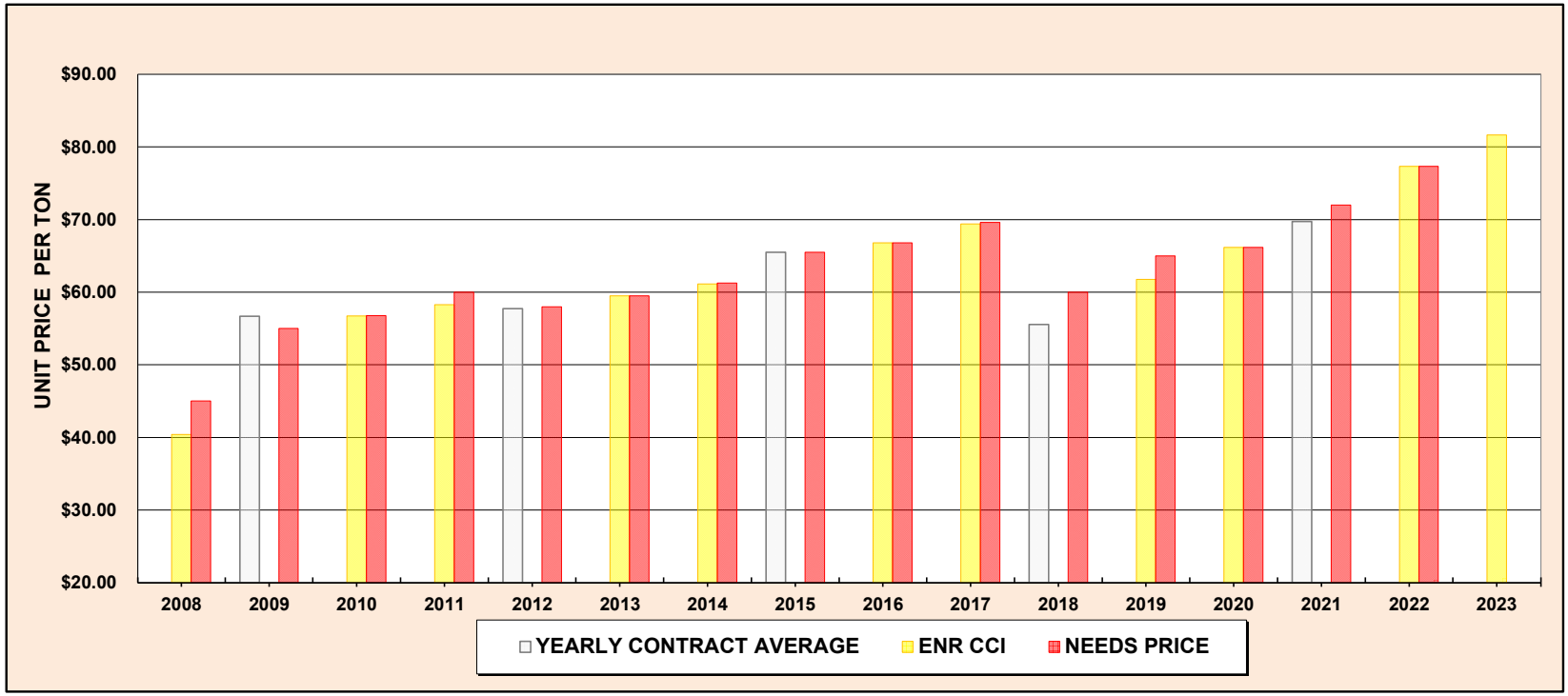


Needs Year	Number of Cities	Quantity (Ton)	Total Cost	Yearly Average Contract Price	Engineering News Record Construction Cost Index	Price Used in Needs
2008					$9.02	$9.00
2009	45	436,802	$4,284,174	9.81		9.81
2010					10.12	10.10
2011					10.37	10.40
2012	57	416,725	4,409,415	10.58		10.65
2013					10.93	10.90
2014					11.19	11.25
2015	40	199,868	2,880,423	14.41		14.00
2016					14.28	$14.30
2017					14.86	14.90
2018	52	317,006	$4,368,054	$13.78		13.78
2019					14.18	14.18
2020					14.44	14.44
2021	59	429,553	7,778,934	$18.11		18.00
2022					19.33	19.33
2023					20.41	

SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 2023 NEEDS STUDY IS $20.41 PER TON

Applying the ENR CCI of 5.6% to last year's "Price used in Needs" of $19.33 results in an increase to $20.41 (+$1.08)
Since 2016, this Unit Cost has increased by an average of $0.87 (note the $3.56 increase in the last UC study)
(Inflation Factor results in a 2023 cost of $20.41)

ALL BITUMINOUS BASE & SURFACE



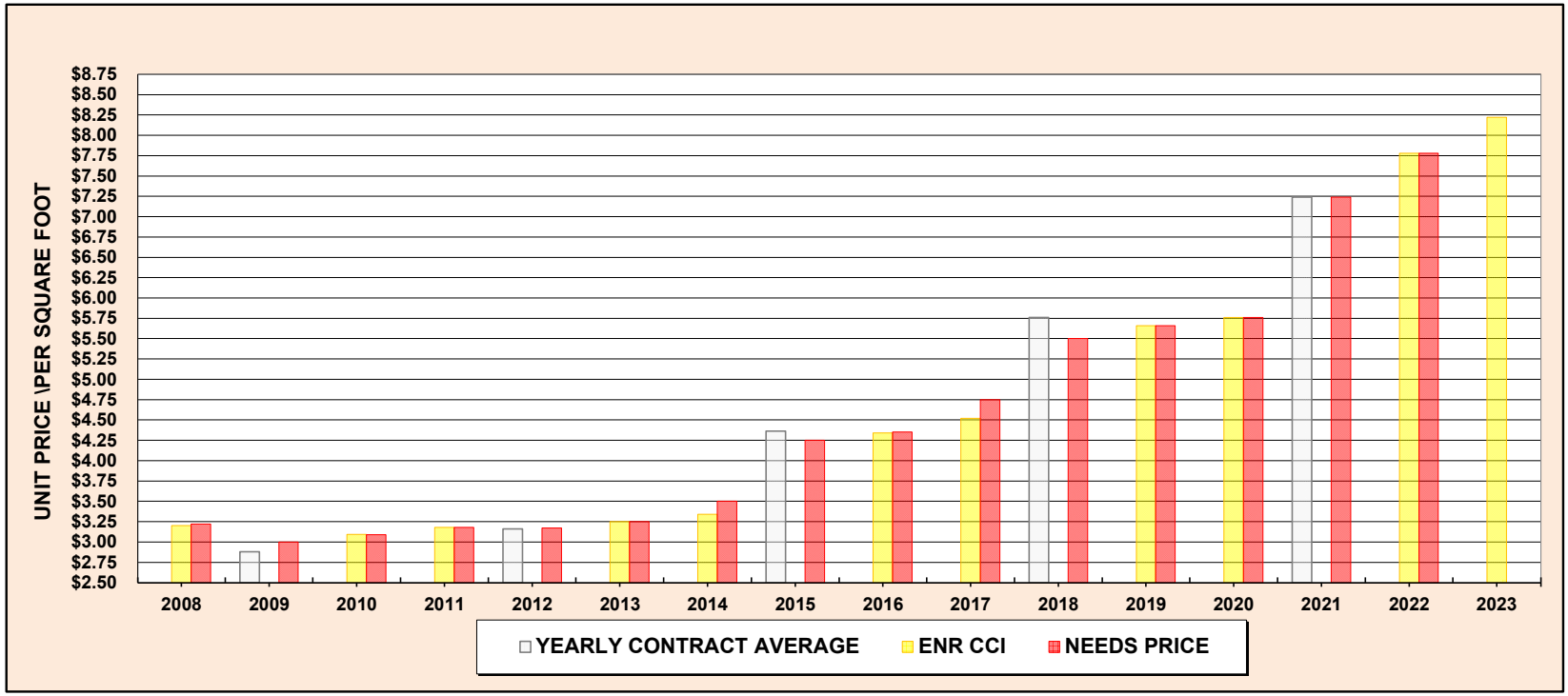
Needs Year	Number of Cities	Quantity (Ton)	Total Cost	Yearly Average Contract Price	Engineering News Record Construction Cost Index	Price Used in Needs
2008					$40.42	$45.00
2009	44	277,797	$15,744,901	56.68		55.00
2010					56.72	56.75
2011					58.27	60.00
2012	65	317,687	18,334,854	57.71		58.00
2013					59.51	59.50
2014					61.11	61.25
2015	48	226,676	14,843,126	65.48		65.50

Needs Year	Number of Cities	Quantity (Ton)	Total Cost	Yearly Average Contract Price	Engineering News Record Construction Cost Index	Price Used in Needs
2016					66.81	$66.80
2017					69.41	69.60
2018	65	339,266	$18,849,950	$55.56		60.00
2019					61.74	65.00
2020					66.17	66.17
2021	69	403,619	28,146,312	$69.73		72.00
2022					77.33	77.33
2023					81.66	

SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 2023 NEEDS STUDY IS $81.66 PER TON

Applying the ENR CCI of 5.6% to last year's "Price used in Needs" of $77.33 results in an increase to $81.66 (+$4.33)
Since 2016, this Unit Cost has increased by an average of $2.12 (note -$9.60 decrease in 2018 UC study)
(Inflation Factor results in a 2023 cost of $81.66)

SIDEWALK CONSTRUCTION



Needs Year	Number of Cities	Quantity (Sq.Ft.)	Total Cost	Yearly Average Contract Price	Engineering News Record Construction Cost Index	Price Used in Needs
2008					$3.20	$3.22
2009	44	95,689	$2,482,820	2.88		3.00
2010					3.09	3.09
2011					3.18	3.18
2012	51	66,045	1,880,257	3.16		3.17
2013					3.25	3.25
2014					3.34	3.50
2015	39	356,709	1,556,517	4.36		4.25

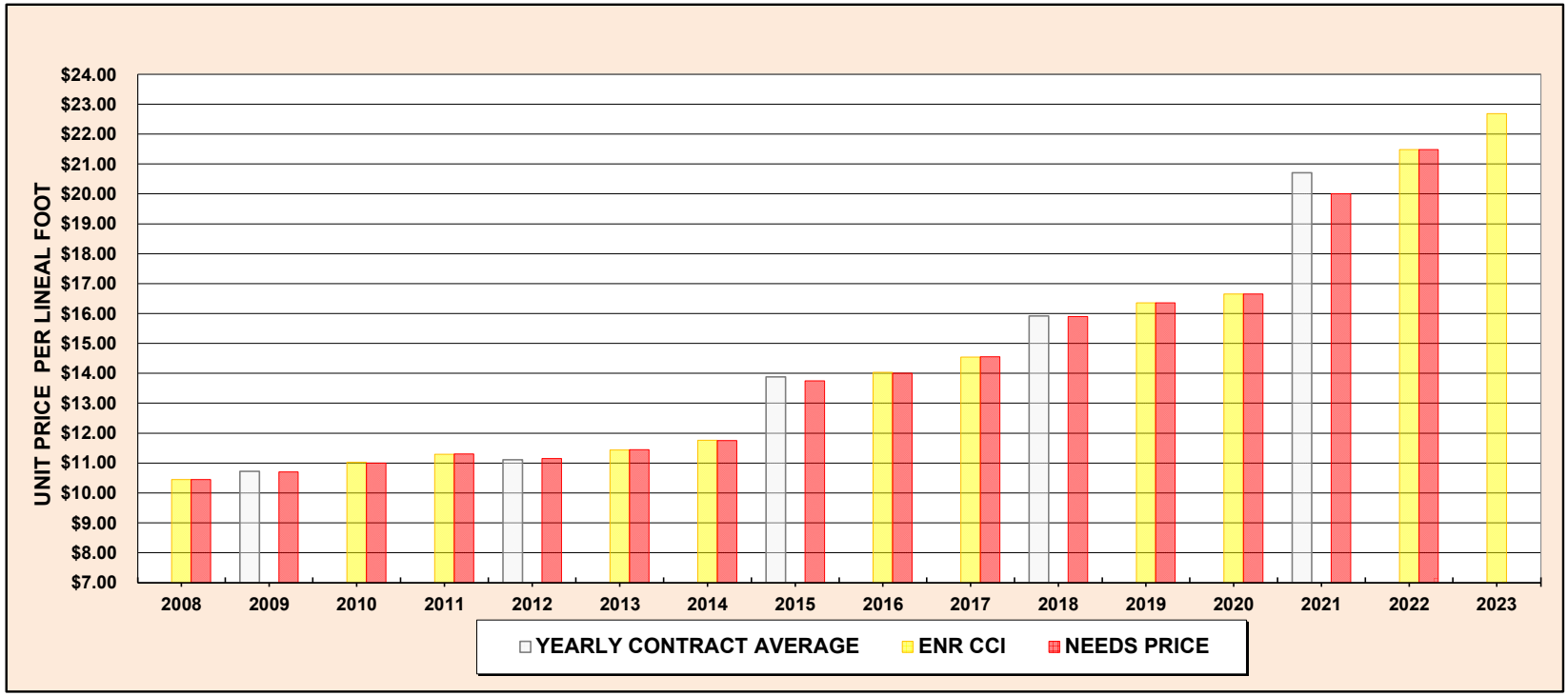
PRICE PER SQUARE YARD WAS USED UNTIL 2012 AND CHANGED TO SQUARE FOOT IN 2013

Needs Year	Number of Cities	Quantity (Sq.Ft.)	Total Cost	Yearly Average Contract Price	Engineering News Record Construction Cost Index	Price Used in Needs
2016					4.34	$4.35
2017					4.52	4.75
2018	52	608,114	$3,502,293	$5.76		5.50
2019					5.66	5.66
2020					5.76	5.76
2021	60	1,175,309	8,509,411	$7.24		7.24
2022					7.78	7.78
2023					8.22	

SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 2023 NEEDS STUDY IS $8.22 PER SQ. FT.

Applying the ENR CCI of 5.6% to last year's "Price used in Needs" of $7.78 results in an increase to $8.22 (+$0.44)
Since 2016, this Unit Cost has increased by an average of $0.55 (note the $1.48 increase in the last UC study)
(Inflation Factor results in a 2023 cost of $8.22)

CURB AND GUTTER CONSTRUCTION



Needs Year	Number of Cities	Quantity (Ln. Ft.)	Total Cost	Yearly Average Contract Price	Engineering News Record Construction Cost Index	Price Used in Needs
2008					$10.45	$10.45
2009	43	262,251	$2,812,246	10.72		10.70
2010					11.03	11.00
2011					11.29	11.30
2012	63	281,751	3,130,181	11.11		11.15
2013					11.44	11.45
2014					11.76	11.75
2015	44	168,891	2,344,989	13.88		13.75

Needs Year	Number of Cities	Quantity (Ln. Ft.)	Total Cost	Yearly Average Contract Price	Engineering News Record Construction Cost Index	Price Used in Needs
2016					14.03	$14.00
2017					14.55	14.55
2018	61	267,833	$4,263,081	$15.92		15.90
2019					16.36	16.36
2020					16.65	16.65
2021	60	371,066	7,683,047	$20.71		20.00
2022					21.48	21.48
2023					22.68	

SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 2023 NEEDS STUDY IS $22.68 PER LIN. FT.

Applying the ENR CCI of 5.6% to last year's "Price used in Needs" of $21.48 results in an increase to $22.68 (+$1.20)
Since 2016, this Unit Cost has increased by an average of $1.24 (note the $3.35 increase in the last UC study)
(Inflation Factor results in a 2023 cost of $22.68)

MnDOT State Aid Bridge Office
2022 Calendar Year - - Bridge Cost Report

Separated per Bridge Length < 150'

SORTED BY BRIDGE LENGTH

New Bridge Number	Project Type	Project Number	Length	Beam Type Code	Letting Date	Area	Cost	Unit Cost
27C21	SAP	142-594-002	31.50	C-SLAB	2/1/2022	1108	$488,853	$441.20
27C27	SAP	142-594-001	31.50	C-SLAB	2/1/2022	1423	$520,449	$365.74
27C26	SAP	142-148-007	31.52	C-SLAB	2/1/2022	1423	$520,113	$365.50
07595	SAP	007-640-005	54.00	PCB	3/2/2022	1863	$344,735	$185.04
65577	SAP	065-603-013	57.92	PCB	3/7/2022	1827	$342,680	$187.56
85578	SAP	085-627-013	66.67	C-SLAB	1/25/2022	2356	$675,153	$286.57
23603	SAP	023-599-206	66.83	C-SLAB	11/14/2022	1939	$455,991	$235.17
56548	SAP	056-641-011	70.00	C-SLAB	1/26/2022	3488	$680,323	$195.05
66562	SAP	066-676-003	72.69	PCB	4/14/2022	3562	$931,530	$261.52
25623	SAP	025-599-131	72.92	PCB	11/30/2022	2309	$489,387	$211.95
64600	SAP	064-599-123	77.48	PCB	9/22/2022	2402	$472,692	$196.79
64598	SAP	064-599-121	77.92	PCB	9/22/2022	2416	$403,473	$167.00
07588	SAP	007-598-029	78.00	PCB	4/20/2022	2418	$403,450	$166.85
20564	SAP	020-599-120	81.00	C-SLAB	2/9/2022	2511	$510,593	$203.34
16524	SAP	016-599-003	86.00	TTS	1/11/2022	1892	$906,401	$479.07
51541	SP	051-638-026	86.50	C-SLAB	6/7/2022	5118	$1,039,686	$203.14
64596	SAP	064-599-120	86.92	PCB	3/4/2022	3042	$438,316	$144.09
69A78	SAP	069-599-049	86.92	PCB	10/27/2022	2695	$689,591	$255.88
65575	SAP	065-599-088	87.00	C-SLAB	12/16/2022	3045	$478,858	$157.26
87580	SAP	087-603-032	88.00	C-SLAB	11/17/2022	3080	$475,175	$154.28
50601	SP	055-646-006	90.35	C-SLAB	10/20/2022	3554	$1,071,025	$301.36
85579	SAP	085-607-012	90.63	PCB	1/25/2022	2719	$1,763,150	$648.46
25620	SP	025-598-022	92.17	PCB	4/12/2022	3226	$511,765	$158.64

NOTE: LIST OF BRIDGES LESS THAN 150' LENGTH CONTINUED ON NEXT SHEET.

MnDOT State Aid Bridge Office
2022 Calendar Year - - Bridge Cost Report

Separated per Bridge Length < 150' (Cont'd)

SORTED BY BRIDGE LENGTH

New Bridge Number	Project Type	Project Number	Length	Beam Type Code	Letting Date	Area	Cost	Unit Cost
51540	SAP	051-599-105	95.04	C-SLAB	7/19/2022	2946	$405,159	$137.53
32581	SP	032-618-010	95.25	PCB	9/2/2022	3715	$775,293	$208.69
09535	SAP	009-606-037	95.83	C-SLAB	10/17/2022	4688	$1,047,093	$223.36
64597	SAP	064-599-117	97.67	PCB	3/4/2022	3418	$585,186	$171.21
64599	SAP	064-599-113	100.19	C-SLAB	3/4/2022	2905	$553,817	$190.64
07598	SAP	007-598-031	101.50	PCB	2/2/2022	3099	$494,233	$159.48
65567	SP	065-598-018	108.39	PCB	6/2/2022	3830	$738,603	$192.85
81531	SP	081-598-016	111.73	C-SLAB	3/3/2022	3949	$645,472	$163.45
43562	SAP	043-599-044	114.77	C-SLAB	4/14/2022	3558	$639,469	$179.73
23602	SAP	023-599-199	136.30	C-SLAB	6/20/2022	4244	$934,348	$220.16
27C66	SAP	027-651-010	139.70	PCB	3/1/2022	6590	$1,712,162	$259.81
27C67	SAP	027-651-009	142.17	PCB	3/1/2022	6705	$1,602,009	$238.93
56546	SAP	056-635-036	143.67	PCB	1/5/2022	5603	$1,051,564	$187.68

Total Cost	**$25,797,801**
Total Deck Area	**114,666**
Average Cost per Sq Ft	**$224.98**
Total No. of Bridges < 150'	**36**

MnDOT State Aid Bridge Office
2022 Calendar Year - - Bridge Cost Report

Separated per Bridge Length > 150'

SORTED BY BRIDGE LENGTH

New Bridge Number	Project Type	Project Number	Length	Beam Type Code	Letting Date	Area	Cost	Unit Cost
84535	SP	084-604-013	155.17	PCB	5/11/2022	5431	$1,337,040	$246.19
30520	SAP	030-614-023	239.56	PCB	4/9/2022	9343	$2,090,677	$223.77
36534	SAP	036-624-019	263.17	PCB	4/13/2022	11316	$3,454,564	$305.28
10553	SAP	010-632-018	274.67	PCB	1/5/2022	10713	$2,197,694	$205.14
08553	SP	008-608-041	404.92	PCB	6/15/2022	12552	$3,121,560	$248.69

Total Cost	**$12,201,534**
Total Deck Area	**49,355**
Average Cost per Sq Ft	**$247.22**
Total No. of Bridges > 150'	**5**

MnDOT State Aid Bridge Office
2022 Calendar Year - - Bridge Cost Report

Totals for All Bridges Let in CY 2022

Total Cost for all Bridges	**$37,999,335**
Total Deck Area for all Bridges	**164,021**
Average Cost per Sq Ft	**$231.67**
Total Number of Bridges	**41**

1/2 = $115.84

ALL BRIDGES (ready to separate for report)

New Bridge No.	Project Type	Project Number	Length	Beam Type	Letting Date	Area	Cost	Unit Cost
09535	SAP	009-606-037	95.83	C-SLAB	10/17/2022	4688	$1,047,093	$223.36
20564	SAP	020-599-120	81.00	C-SLAB	2/9/2022	2511	$510,593	$203.34
23602	SAP	023-599-199	136.30	C-SLAB	6/20/2022	4244	$934,348	$220.16
23603	SAP	023-599-206	66.83	C-SLAB	11/14/2022	1939	$455,991	$235.17
43562	SAP	043-599-044	114.77	C-SLAB	4/14/2022	3558	$639,469	$179.73
50601	SP	055-646-006	90.35	C-SLAB	10/20/2022	3554	$1,071,025	$301.36
51540	SAP	051-599-105	95.04	C-SLAB	7/19/2022	2946	$405,159	$137.53
51541	SP	051-638-026	86.50	C-SLAB	6/7/2022	5118	$1,039,686	$203.14
56548	SAP	056-641-011	70.00	C-SLAB	1/26/2022	3488	$680,323	$195.05
64599	SAP	064-599-113	100.19	C-SLAB	3/4/2022	2905	$553,817	$190.64
65575	SAP	065-599-088	87.00	C-SLAB	12/16/2022	3045	$478,858	$157.26
81531	SP	081-598-016	111.73	C-SLAB	3/3/2022	3949	$645,472	$163.45
85578	SAP	085-627-013	66.67	C-SLAB	1/25/2022	2356	$675,153	$286.57
87580	SAP	087-603-032	88.00	C-SLAB	11/17/2022	3080	$475,175	$154.28
27C21	SAP	142-594-002	31.50	C-SLAB	2/1/2022	1108	$488,853	$441.20
27C26	SAP	142-148-007	31.52	C-SLAB	2/1/2022	1423	$520,113	$365.50
27C27	SAP	142-594-001	31.50	C-SLAB	2/1/2022	1423	$520,449	$365.74
07595	SAP	007-640-005	54.00	PCB	3/2/2022	1863	$344,735	$185.04
65577	SAP	065-603-013	57.92	PCB	3/7/2022	1827	$342,680	$187.56
66562	SAP	066-676-003	72.69	PCB	4/14/2022	3562	$931,530	$261.52
25623	SAP	025-599-131	72.92	PCB	11/30/2022	2309	$489,387	$211.95
64600	SAP	064-599-123	77.48	PCB	9/22/2022	2402	$472,692	$196.79
64598	SAP	064-599-121	77.92	PCB	9/22/2022	2416	$403,473	$167.00
07588	SAP	007-598-029	78.00	PCB	4/20/2022	2418	$403,450	$166.85
64596	SAP	064-599-120	86.92	PCB	3/4/2022	3042	$438,316	$144.09
69A78	SAP	069-599-049	86.92	PCB	10/27/2022	2695	$689,591	$255.88
85579	SAP	085-607-012	90.63	PCB	1/25/2022	2719	$1,763,150	$648.46
25620	SP	025-598-022	92.17	PCB	4/12/2022	3226	$511,765	$158.64
32581	SP	032-618-010	95.25	PCB	9/2/2022	3715	$775,293	$208.69
64597	SAP	064-599-117	97.67	PCB	3/4/2022	3418	$585,186	$171.21
07598	SAP	007-598-031	101.50	PCB	2/2/2022	3099	$494,233	$159.48
65567	SP	065-598-018	108.39	PCB	6/2/2022	3830	$738,603	$192.85
27C66	SAP	027-651-010	139.70	PCB	3/1/2022	6590	$1,712,162	$259.81
27C67	SAP	027-651-009	142.17	PCB	3/1/2022	6705	$1,602,009	$238.93
56546	SAP	056-635-036	143.67	PCB	1/5/2022	5603	$1,051,564	$187.68
84535	SP	084-604-013	155.17	PCB	5/11/2022	5431	$1,337,040	$246.19
30520	SAP	030-614-023	239.56	PCB	4/9/2022	9343	$2,090,677	$223.77
36534	SAP	036-624-019	263.17	PCB	4/13/2022	11316	$3,454,564	$305.28
10553	SAP	010-632-018	274.67	PCB	1/5/2022	10713	$2,197,694	$205.14
08553	SP	008-608-041	404.92	PCB	6/15/2022	12552	$3,121,560	$248.69
27152	SP	027-752-035	365.86	REHAB	10/25/2022	24284	$3,742,347	$154.11
16524	SAP	016-599-003	86.00	TTS	1/11/2022	1892	$906,401	$479.07
				with REHABS / BRDWKS	TOTALS	188305	**$41,741,681**	
					Avg Price		$221.67	
				without REHABS / BRDWKS	TOTALS	164021	**$37,999,335**	one-half
					Avg Price		$231.67	$115.84

BRIDGES / STRUCTURES

NEEDS YEAR	NUMBER OF PROJECTS	DECK AREA	TOTAL COST	YEARLY AVERAGE CONTRACT PRICE	PRICE USED IN NEEDS	5-YEAR AVERAGE CONTRACT PRICE
2012	69	475,190	$64,255,407	$135.22	**$125.00**	$116.49
2013	73	505,031	61,637,866	122.05	**120.00**	117.80
2014	91	379,364	54,646,656	144.05	**72.00**	120.85
2015	49	196,550	37,973,287	193.20	**96.50**	130.48
2016	41	178,429	42,852,558	240.17	**120.08**	150.68
2017	47	184,138	31,962,025	173.58	**90.00**	158.69

				AVG COST PER SQ FT	1/2 of 5 year avg	AVG COST PER SQ FT
NEEDS YEAR	NUMBER OF PROJECTS	DECK AREA	TOTAL COST	YEARLY AVERAGE CONTRACT PRICE	PRICE USED IN NEEDS	5-YEAR AVERAGE CONTRACT PRICE
***2018**	42	159,281	$24,786,595	$155.62	**$87.55**	$175.10
***2019**	41	150,251	27,812,170	185.10	**95.20**	190.40
***2020**	29	142,041	28,354,895	199.62	**95.67**	191.33
***2021**	31	136,971	27,241,746	198.89	**90.70**	186.91
***2022**	55	264,473	59,990,343	226.83	**98.58**	197.17
***2023**	41	164,021	37,999,335	231.67	***105.74***	211.48

* recommended cost has been based off five years of data since 2018

SUBCOMMITTEES RECOMMENDED STRUCTURE PRICE FOR THE 2023 NEEDS STUDY IS $105.74 PER SQ. FT.

MSB RESOLUTIONS STATE THAT 1\2 OF THE STATEWIDE AVERAGE BRIDGE COST BE USED AS THE STRUCTURE COST IN THE NEEDS

$105.74 would result in an 7.3% increase from last year's Unit Cost price of $98.58

N/MSAS/2023 June BOOK/ALL BRIDGES GRAPH 2023.XLSX

Memo

Date: April 6, 2022

To: William Lanoux
Manager, Municipal State Aid Street Needs Section

From: Juanita Voigt
State Aid Hydraulic Specialist
651-366-4469

Last Year's letter. Apply 5.6% inflation Factor

RE: State Aid Storm Sewer
Construction Costs for 2021

We have completed our analysis of storm sewer construction costs incurred for 2021 and the following assumptions can be utilized for planning purposes per roadway mile:

* 1.056 = $462,147

- Approximately $437,639 for new construction, and $282,659 is last year's average * 1.056 = $298,488 for this year
- Approximately $127,679 for adjustment of existing systems

*1.056 = $134,829

The preceding amounts are based on the average cost per mile of State Aid storm sewer using unit prices. A total of 137 Storm Sewer Plans were reviewed during 2021.

EC: Andrea Hendrickson (MnDOT file)

STORM SEWER COST RECOMMENDATIONS FOR 2023

Municipal Screening Board Resolutions state:

The Unit Cost per mile of Storm Sewer for the highest MSAS Urban ADT Group for Needs Purposes will be based on the average costs of all Storm Sewer Construction on the MSAS system in the previous year. To determine the Unit Cost for the highest ADT Group, average costs for Complete Storm Sewer projects and Partial Storm Sewer projects will be provided to State Aid by the MnDOT Hydraulics Office and then added together and divided by two to calculate a statewide average Unit Cost for all Storm Sewer Construction.

The Unit Cost per mile for Storm Sewer Construction will be calculated for the highest MSAS Urban ADT Group and be prorated downward for the other ADT Groups. This proration has been determined based upon an engineering study requested by the Municipal Screening Board in 2011 and will be the basis for the Needs calculations.

Complete Storm Sewer Cost from Hydraulics Specialist	$462,147	
Partial Storm Sewer Cost from Hydraulics Specialist	$134,829	
Average SS Cost = ($437,639 + $127,679) / 2 =		$298,488
NSS Recommended Unit Cost		$298,500
MSB Approved Unit Cost for 2023		$xxx,xxx

NSS recommended Storm Sewer Costs for 2022

based on 2022 costs - for the 2023 Needs Study

Needs Width of MSAS Urban ADT Groups for Needs Purposes	Existing ADT per Traffic Group	Cost difference from 70' section	MSB approved percent cost difference from 70' section	Cost based on % of Cost of highest Typical Section
26	0 ADT & Non Existing	($88,000)	-29.5%	$210,500
28	1-499	($84,000)	-28.1%	$214,500
34	500-1,999	($72,000)	-24.1%	$226,500
40	2,000-4,999	($60,000)	-20.1%	$238,500
48	5,000-8,999	($44,000)	-14.7%	$254,500
54	9,000-13,999	($32,000)	-10.7%	$266,500
62	14,000-24,999	($16,000)	-5.4%	$282,500
70	25,000 and over	$0	0.0%	**$298,500**

from last year's SS letter
Complete: $437,639
Partial: $127,679
AVG: $282,659

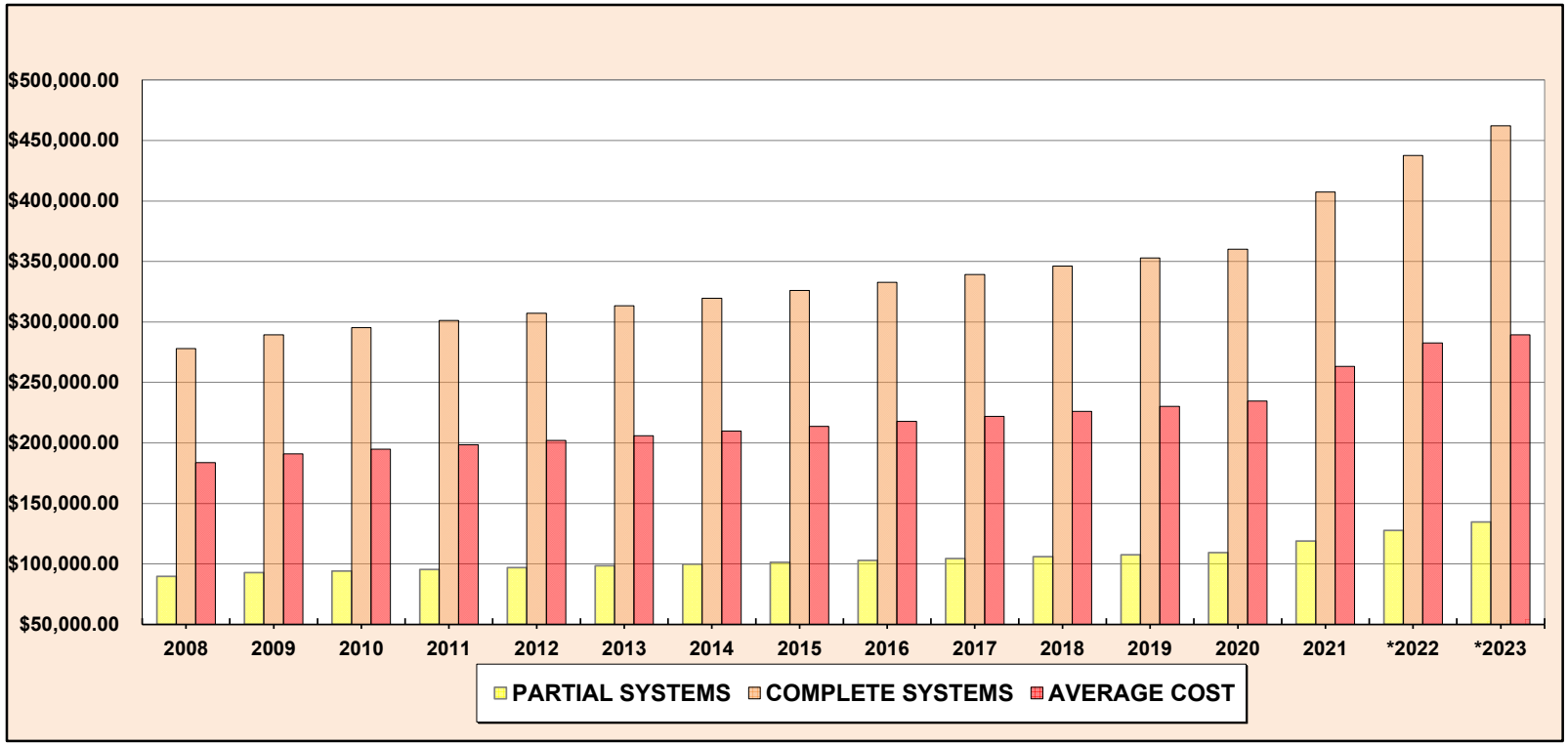
MSB approved Storm Sewer Costs for 2022 (last year)

based on 2021 costs - for the 2022 Needs Study

Needs Width of MSAS Urban ADT Groups	Existing ADT per Traffic Group	Cost difference from 70' section	MSB approved percent cost difference from 70' section	Cost based on % of Cost of highest Typical Section
26	0 ADT & Non Existing	($83,300)	-29.5%	$199,400
28	1-499	($79,500)	-28.1%	$203,200
34	500-1,999	($68,200)	-24.1%	$214,500
40	2,000-4,999	($56,800)	-20.1%	$225,900
48	5,000-8,999	($41,700)	-14.7%	$241,000
54	9,000-13,999	($30,300)	-10.7%	$252,400
62	14,000-24,999	($15,100)	-5.4%	$267,600
70	25,000 and over	$0	0.0%	$282,700

2022-2023 Percentage Change for highest section = 5.6%

STORM SEWER COSTS, 2008 - 2023



Needs Year	Partial Storm Sewer Constructions	Complete Storm Sewer Constructions	Average Cost (basis for Needs)
2008	$89,687	$277,895	$183,791
2009	$92,772	$289,290	$191,031
2010	$94,164	$295,365	$194,765
2011	$95,576	$301,272	$198,424
2012	$97,010	$307,297	$202,154
2013	$98,465	$313,443	$205,954
2014	$99,942	$319,711	$209,827
2015	$101,441	$326,105	$213,773

Needs Year	Partial Storm Sewer Constructions	Complete Storm Sewer Constructions	Average Cost (basis for Needs)
2016	$102,963	$332,627	$217,795
2017	$104,507	$339,280	$221,894
2018	$106,075	$346,066	$226,071
2019	$107,666	$352,988	$230,327
2020	$109,281	$360,048	$234,665
2021	$118,882	$407,485	$263,184
***2022**	$127,679	$437,639	$282,659
***2023**	$134,829	$462,147	$289,488

*** costs based on an inflation factor**

SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 2022 NEEDS STUDY IS $289,500 (for highest of 8 sections)

SIGNALS

CURRENT SCREENING BOARD RESOLUTION ON TRAFFIC SIGNALS

*The Unit Cost for **Traffic Signals** will be determined by the recommendation by the SALT Program Support Engineer and approved by the MSB.*
The Unit Cost for traffic signals will be based on a cost per signal leg, and for Needs purposes a signal leg will be defined as ¼ of the signal cost.
Only signal legs on designated MSAS routes will be included in the Needs study.
Stand-alone pedestrian crossing signals will not be included in the Needs study.

TRAFFIC SIGNALS AND THE UNIT COST STUDY

Traffic Signals are part of the Unit Cost Study. Signal Studies are conducted by The SALT Program Support Engineer once every 3 years. In 'off years' an inflation factor is applied. Here is the summary of this year's study:

SUBCOMMITTEE'S RECOMMENDED SIGNAL PRICE FOR THE 2022 NEEDS IS **$249,034.**

LIGHTING

The unit cost for Street lighting has been $100,000 / per mile since 2007.

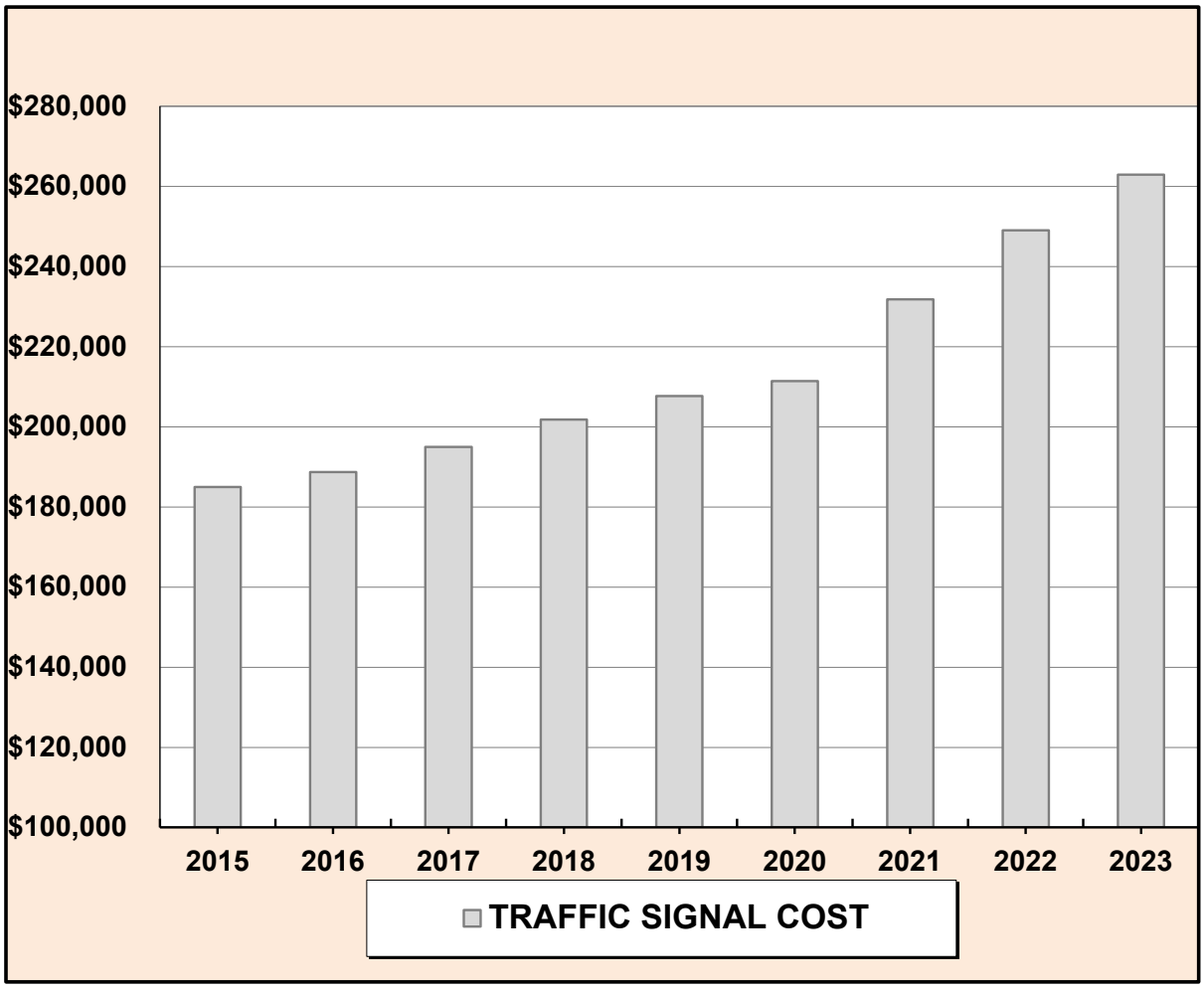
CURRENT SCREENING BOARD RESOLUTION ON STREET LIGHTING

(revised May, 2015)

The Unit Cost for Street Lighting will be determined by multiplying the Unit Price per mile by the segment length. This Unit Cost will remain at $100,000 per mile. The Municipal Screening Board may request a study on this item on any year if it is deemed necessary.

SUBCOMMITTEE'S RECOMMENDED PRICE FOR 2022 NEEDS IS **$100,000** *PER MILE*

TRAFFIC SIGNALS



Needs Year	Signal Cost	% chg
2015	$185,000	
2016	$188,700	2.0
2017	$195,000	3.3
2018	$201,850	3.5
2019	$207,704	2.9
2020	$211,440	1.8
2021	$231,875	9.7
2022	$249,034	7.4
2023	$262,980	5.6

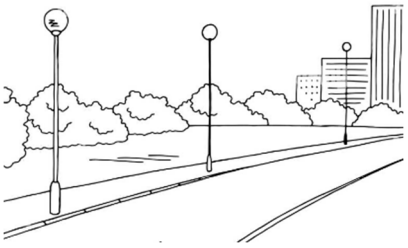
SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 2023 NEEDS STUDY IS $_____

in 2015, Signals became unit cost item that's studied every three years, with an inflation factor applied in 'off years'.

STREET LIGHTING

Current direction from the Municipal Screening Board (from October 2022) The Needs Study Subcommittee should review Street Lighting Needs and look for an AADT group based recommendation.

Current MSB resolution on Lighting: The Unit Cost for Street Lighting will be determined by multiplying the Unit Price per mile by the segment length. This Unit Cost will remain at $100,000 per mile. The Municipal Screening Board may request a study on this item on any year if it is deemed necessary.



HISTORY: STORM SEWER, LIGHTING AND SIGNAL NEEDS COSTS

NEEDS YEAR	STORM SEWER ADJUSTMENT	STORM SEWER** CONSTRUCTION	LIGHTING	SIGNALS**
1998	$76,000	$245,000	$20,000	$24,990-$99,990
1999	79,000	246,000	35,000	24,990-99,990
2000	80,200	248,500	50,000	24,990-99,990
2001	80,400	248,000	78,000	30,000-120,000
2002	81,600	254,200	78,000	30,000-120,000
2003	82,700	257,375	80,000	31,000-124,000
2004	83,775	262,780	80,000	31,000-124,000
2005	85,100	265,780	82,500	32,500-130,000
2006	86,100	268,035	100,000	32,500-130,000
2007	88,100	271,000	100,000	32,500-130,000
2008	89,700	278,200	100,000	32,500-130,000
2009	92,800	289,300	100,000	32,500-130,000
2010	94,200	295,400	100,000	34,000-136,000
2011	95,600	301,300	100,000	34,000-136,000
2012	97,000	307,300	100,000	34,000-136,000
		New Needs Method		
2013	$145,260 to $205,954		100,000	$225,000/signal
2014	148,100 to 210,000		100,000	205,000/signal
2015	150,900 to 214,000		100,000	185,000/signal
2016	153,600 to 217,800		100,000	188,700/signal
2017	156,500 to 221,900		100,000	195,000/signal
2018	159,500 to 226,100		100,000	201,850/signal
2019	162,400 to 230,300		100,000	207,700/signal
2020	165,500 to 234,700		100,000	211,440/signal
2021	185,600 to 263,200		100,000	231,875/signal
2022	199,400 to 282,700		100,000	249,034/signal
2023	*210,500 to 298,500*		*100,000*	262,980/signal

** Signals and Storm Sewer were 'per mile' in old Needs method

NEEDS STUDY SUBCOMMITTEE'S RECOMMENDED PRICES FOR 2023:

Storm Sewer (high section) _____

Lighting / Mile _____

Traffic Signals (per Signal) _____

Street Lighting has been:
$100,000 per mile since 2006.

At 19 poles per mile:
that's about $5,200 per light

At 26 poles per miles:
that's about $3,800 per light

figures are likely low

UNIT COST FOR STREET LIGHTING

Report for the Needs Study Subcommittee
Spring 2000 meeting
4/13/00

♦

HISTORY

The following paragraph is from the minutes of the April 12, 1999 meeting of the Needs Study Subcommittee:

> The Screening Committee directed the Needs Study Subcommittee to review the lighting costs. After much discussion the Subcommittee is recommending a price increase from $20,000 a mile to $35,000 per mile. An estimate of 14 poles with a cost of $2500 per pole was used to determine the proposed cost.

The following is from the minutes of the June 3, 1999 Screening Board meeting:

> Ed Warn moved to send the street lighting unit price analysis back to the Needs Subcommittee to look further at AASHTO standards, other standards if applicable, to recommend a per-mile street lighting cost and to consider the potential use of after-the-fact needs for street lighting. Ramankutty Kannankutty seconded the motion. Discussion regarding the motion included the following:
>
> - Keep the street lighting cost unit price calculations as simple as possible.
> - Determine what a realistic amount would be for cost of street lighting.
> - Establish a standard roadway street lighting as the basis for the unit prices.
> - Establish a minimal lighting standard and make it a requirement for actual construction requirements.
>
> Upon vote, the motion carried. Mark Winson and David Salo voted against the motion.

Options & Questions

The Mn/DOT State Lighting Engineer made the following recommendations, which are based upon the AASHTO street lighting book entitled 'An Informational Guide for Roadway Lighting':

Local Commercial would have about 26 lights per mile. This is an average of 0.6 to 0.8 footcandles and is based on 200 foot staggered spacing. It does include intersections, but signalized intersections would reduce the number of light poles.

Local Residential would have intersection and midblock lighting. Assuming 10 blocks per mile, that would be 19 light figures. AASHTO recommends an average

or 0.3 footcandles, but this might or might not be achieved depending on the length of the blocks.

Mn/DOT estimates that a 40-foot pole with a standard cobra head costs $4000 to install. This includes foundation, cables, conduit, etc.

So, for estimating and planning purposes, the Mn/DOT State Lighting Engineer recommends using $104,000 per mile for Local Commercial and $76,000 per mile for Local Residential lighting costs

for 2022, would be $142,500 and $195,000

Otter Tail Power, Northern States Power, and the FHWA were also contacted about costs per mile for street lighting. The only response was from NSP, who reviewed the numbers from the State Lighting Engineer, and agreed that they were realistic figures.

so approx. $7500/pole

Currently, all segments receive street lighting needs. Rural and urban, adequate and deficient.
Should all deficient and adequate segments receive lighting needs?
Should both urban and rural segments receive lighting needs?

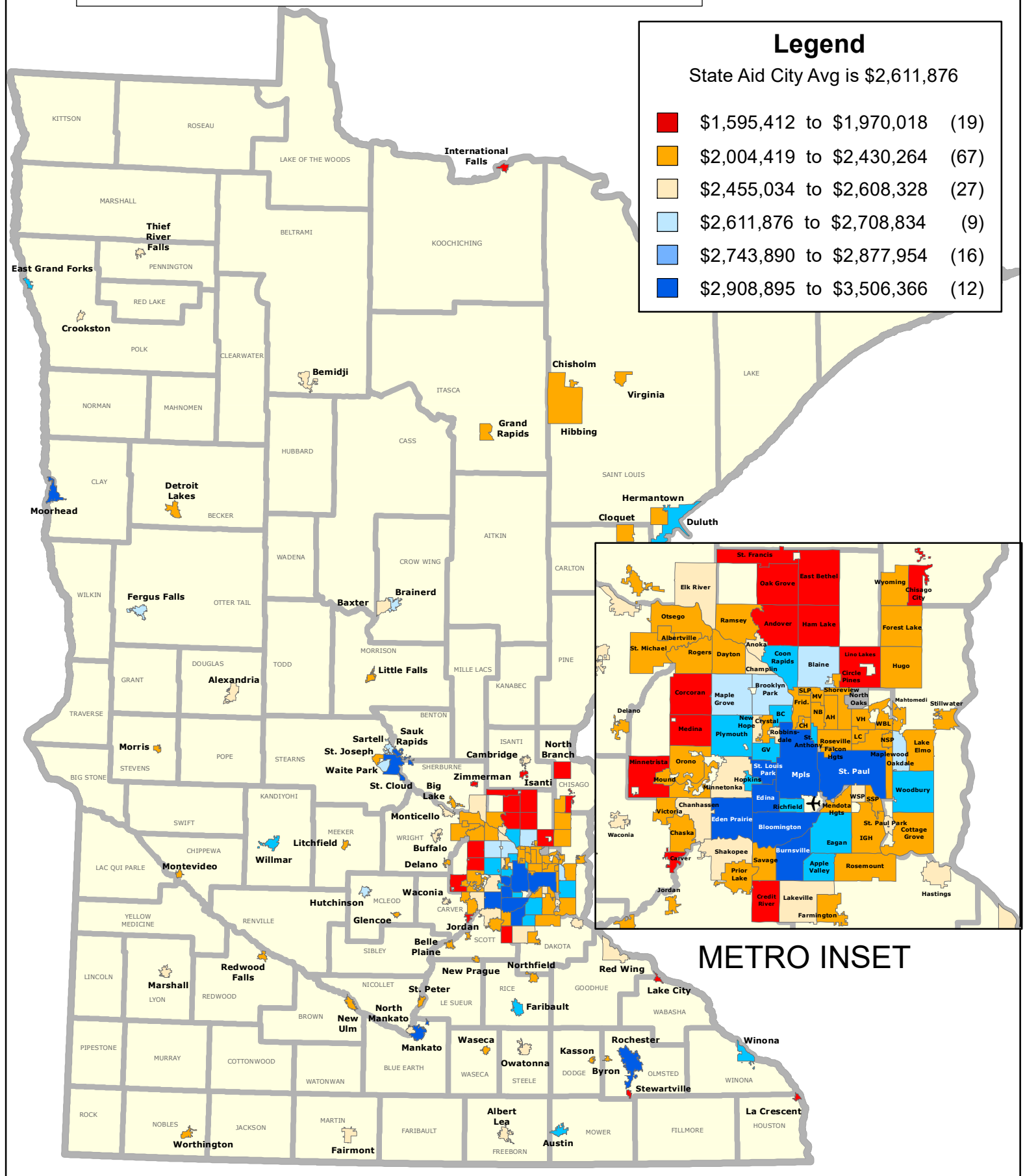
from MNDOT office of Traffic Engineering

Should lighting needs be based on projected traffic like traffic signal needs are? Example:

Projected Traffic	Percentage X	Unit Price =	Needs per Mile
0 – 4,999	0.25	$35,000	$8,750
5,000 – 9,999	0.50	$35,000	$17,500
10,000 & over	1.00	$35,000	$35,000

Should there be an after the fact positive needs adjustment for street lighting based on the state aid portion of the actual construction cost? The city would have to submit documentation of any street lighting adjustment requested.

Total Needs Costs per Mile for State Aid Cities, 2022



Source: State Aid.

Current method: $100,000 per mile for all segments

MSAS URBAN ADT GROUPS FOR NEEDS PURPOSES

Quantities Based on a One Mile Section

$100,000 per mile

EXISTING ADT	NEEDS WIDTH	NEEDS GENERATION DATA	GRADING DEPTH (inches)	GRADING QUANTITY (cubic yards)	CLASS 5 GRAVEL BASE DEPTH (inches)	CLASS 5 GRAVEL BASE QUANTITY (Tons)	TOTAL BITUMINOUS QUANTITY (TONS)
0 EXISTING ADT & NON EXISTING	**26 FOOT ROADBED WIDTH**	2- 11' TRAFFIC LANES 0 PARKING LANES 2- 2' CURB REACTION	22 INCHES	**11,655**	6 INCHES	**4,346**	**2,917** 4 INCHES
1-499 EXISTING ADT	**28' FOOT ROADBED WIDTH**	2- 12' TRAFFIC LANES 0 PARKING LANES 2- 2' CURB REACTION	22 INCHES	**12,496**	6 INCHES	**4,691**	**3,182** 4 INCHES
500-1999 EXISTING ADT	**34 FOOT ROADBED WIDTH**	2- 12' TRAFFIC LANES 1- 8' PARKING LANE 1- 2' CURB REACTION	26 INCHES	**17,698**	10 INCHES	**10,176**	**3,978** 4 INCHES
2000-4999 EXISTING ADT	**40 FOOT ROADBED WIDTH**	2-12' TRAFFIC LANES 2- 8' PARKING LANE	32 INCHES	**25,188**	16 INCHES	**19,628**	**4,773** 4 INCHES
5000-8999 EXISTING ADT	**48 FOOT ROADBED WIDTH**	4-11' TRAFFIC LANES 2- 2' CURB REACTION	35 INCHES	**32,795**	19 INCHES	**27,907**	**5,834** 4 INCHES
9000-13,999 EXISTING ADT	**54 FOOT ROADBED WIDTH**	4-11' TRAFFIC LANES 1- 8' PARKING LANE 1- 2' CURB REACTION	36 INCHES	**37,918**	19 INCHES	**31,460**	**8,287** 5 INCHES
14,000-24,999 EXISTING ADT	**62 FOOT ROADBED WIDTH**	4-11' TRAFFIC LANES 1- 14' CENTER TURN 2- 2' CURB REACTION	38 INCHES	**45,838**	20 INCHES	**38,049**	**11,535** 6 INCHES
GT 25,000 EXISTING ADT	**70 FOOT ROADBED WIDTH**	6-11' TRAFFIC LANES 0 PARKING LANES 2- 2' CURB REACTION	39 INCHES	**53,172**	21 INCHES	**44,776**	**13,126** 6 INCHES

Scenario #2: Removing Street Lighting

MSAS URBAN ADT GROUPS FOR NEEDS PURPOSES

Quantities Based on a One Mile Section

$0 per mile

EXISTING ADT	NEEDS WIDTH	NEEDS GENERATION DATA	GRADING DEPTH (inches)	GRADING QUANTITY (cubic yards)	CLASS 5 GRAVEL BASE DEPTH (inches)	CLASS 5 GRAVEL BASE QUANTITY (Tons)	TOTAL BITUMINOUS QUANTITY (TONS)
0 EXISTING ADT & NON EXISTING	**26 FOOT ROADBED WIDTH**	2- 11' TRAFFIC LANES 0 PARKING LANES 2- 2' CURB REACTION	22 INCHES	**11,655**	6 INCHES	**4,346**	**2,917** 4 INCHES
1-499 EXISTING ADT	**28' FOOT ROADBED WIDTH**	2- 12' TRAFFIC LANES 0 PARKING LANES 2- 2' CURB REACTION	22 INCHES	**12,496**	6 INCHES	**4,691**	**3,182** 4 INCHES
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2000-4999 EXISTING ADT	**40 FOOT ROADBED WIDTH**	2-12' TRAFFIC LANES 2- 8' PARKING LANE	32 INCHES	**25,188**	16 INCHES	**19,628**	**4,773** 4 INCHES
5000-8999 EXISTING ADT	**48 FOOT ROADBED WIDTH**	4-11' TRAFFIC LANES 2- 2' CURB REACTION	35 INCHES	**32,795**	19 INCHES	**27,907**	**5,834** 4 INCHES
9000-13,999 EXISTING ADT	**54 FOOT ROADBED WIDTH**	4-11' TRAFFIC LANES 1- 8' PARKING LANE 1- 2' CURB REACTION	36 INCHES	**37,918**	19 INCHES	**31,460**	**8,287** 5 INCHES
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GT 25,000 EXISTING ADT	**70 FOOT ROADBED WIDTH**	6-11' TRAFFIC LANES 0 PARKING LANES 2- 2' CURB REACTION	39 INCHES	**53,172**	21 INCHES	**44,776**	**13,126** 6 INCHES

Scenario #3

MSAS URBAN ADT GROUPS FOR NEEDS PURPOSES

Quantities Based on a One Mile Section

EXISTING ADT	NEEDS WIDTH	NEEDS GENERATION DATA	GRADING DEPTH (inches)	GRADING QUANTITY (cubic yards)	CLASS 5 GRAVEL BASE DEPTH (inches)	CLASS 5 GRAVEL BASE QUANTITY (Tons)	TOTAL BITUMINOUS QUANTITY (TONS)
0 EXISTING ADT & NON EXISTING	**26 FOOT ROADBED WIDTH**	2- 11' TRAFFIC LANES 0 PARKING LANES 2- 2' CURB REACTION	22 INCHES	**11,655**	6 INCHES	**4,346**	**2,917** 4 INCHES
1-499 EXISTING ADT	**28' FOOT ROADBED WIDTH**	2- 12' TRAFFIC LANES 0 PARKING LANES 2- 2' CURB REACTION	22 INCHES	**12,496**	6 INCHES	**4,691**	**3,182** 4 INCHES
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2000-4999 EXISTING ADT	**40 FOOT ROADBED WIDTH**	2-12' TRAFFIC LANES 2- 8' PARKING LANE	32 INCHES	**25,188**	16 INCHES	**19,628**	**4,773** 4 INCHES
5000-8999 EXISTING ADT	**48 FOOT ROADBED WIDTH**	4-11' TRAFFIC LANES 2- 2' CURB REACTION	35 INCHES	**32,795**	19 INCHES	**27,907**	**5,834** 4 INCHES
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GT 25,000 EXISTING ADT	**70 FOOT ROADBED WIDTH**	6-11' TRAFFIC LANES 0 PARKING LANES 2- 2' CURB REACTION	39 INCHES	**53,172**	21 INCHES	**44,776**	**13,126** 6 INCHES

$0 per mile

$142,500 per mile

$195,000 per mile

Scenario #4

MSAS URBAN ADT GROUPS FOR NEEDS PURPOSES

Quantities Based on a One Mile Section

EXISTING ADT	NEEDS WIDTH	NEEDS GENERATION DATA	GRADING DEPTH (inches)	GRADING QUANTITY (cubic yards)	CLASS 5 GRAVEL BASE DEPTH (inches)	CLASS 5 GRAVEL BASE QUANTITY (Tons)	TOTAL BITUMINOUS QUANTITY (TONS)
0 EXISTING ADT & NON EXISTING	**26 FOOT ROADBED WIDTH**	2- 11' TRAFFIC LANES 0 PARKING LANES 2- 2' CURB REACTION	22 INCHES	**11,655**	6 INCHES	**4,346**	**2,917** 4 INCHES
1-499 EXISTING ADT	**28' FOOT ROADBED WIDTH**	2- 12' TRAFFIC LANES 0 PARKING LANES 2- 2' CURB REACTION	22 INCHES	**12,496**	6 INCHES	**4,691**	**3,182** 4 INCHES
500-1999 EXISTING ADT	**34 FOOT ROADBED WIDTH**	2- 12' TRAFFIC LANES 1- 8' PARKING LANE 1- 2' CURB REACTION	26 INCHES	**17,698**	10 INCHES	**10,176**	**3,978** 4 INCHES
2000-4999 EXISTING ADT	**40 FOOT ROADBED WIDTH**	2-12' TRAFFIC LANES 2- 8' PARKING LANE	32 INCHES	**25,188**	16 INCHES	**19,628**	**4,773** 4 INCHES
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GT 25,000 EXISTING ADT	**70 FOOT ROADBED WIDTH**	6-11' TRAFFIC LANES 0 PARKING LANES 2- 2' CURB REACTION	39 INCHES	**53,172**	21 INCHES	**44,776**	**13,126** 6 INCHES

$0 per mile

$142,500 per mile

$195,000 per mile

Scenario #5

MSAS URBAN ADT GROUPS FOR NEEDS PURPOSES

Quantities Based on a One Mile Section

EXISTING ADT	NEEDS WIDTH	NEEDS GENERATION DATA	GRADING DEPTH (inches)	GRADING QUANTITY (cubic yards)	CLASS 5 GRAVEL BASE DEPTH (inches)	CLASS 5 GRAVEL BASE QUANTITY (Tons)	TOTAL BITUMINOUS QUANTITY (TONS)
0 EXISTING ADT & NON EXISTING	**26 FOOT ROADBED WIDTH**	2- 11' TRAFFIC LANES 0 PARKING LANES 2- 2' CURB REACTION	22 INCHES	**11,655**	6 INCHES	**4,346**	**2,917** 4 INCHES
1-499 EXISTING ADT	**28' FOOT ROADBED WIDTH**	2- 12' TRAFFIC LANES 0 PARKING LANES 2- 2' CURB REACTION	22 INCHES	**12,496**	6 INCHES	**4,691**	**3,182** 4 INCHES
500-1999 EXISTING ADT	**34 FOOT ROADBED WIDTH**	2- 12' TRAFFIC LANES 1- 8' PARKING LANE 1- 2' CURB REACTION	26 INCHES	**17,698**	10 INCHES	**10,176**	**3,978** 4 INCHES
2000-4999 EXISTING ADT	**40 FOOT ROADBED WIDTH**	2-12' TRAFFIC LANES 2- 8' PARKING LANE	32 INCHES	**25,188**	16 INCHES	**19,628**	**4,773** 4 INCHES
5000-8999 EXISTING ADT	**48 FOOT ROADBED WIDTH**	4-11' TRAFFIC LANES 2- 2' CURB REACTION	35 INCHES	**32,795**	19 INCHES	**27,907**	**5,834** 4 INCHES
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14,000-24,999 EXISTING ADT	**62 FOOT ROADBED WIDTH**	4-11' TRAFFIC LANES 1- 14' CENTER TURN 2- 2' CURB REACTION	38 INCHES	**45,838**	20 INCHES	**38,049**	**11,535** 6 INCHES
GT 25,000 EXISTING ADT	**70 FOOT ROADBED WIDTH**	6-11' TRAFFIC LANES 0 PARKING LANES 2- 2' CURB REACTION	39 INCHES	**53,172**	21 INCHES	**44,776**	**13,126** 6 INCHES

$0 per mile

$71,250 per mile

1/2 residential cost

$95,500 per mile

1/2 commericial cost

Scenario #6

MSAS URBAN ADT GROUPS FOR NEEDS PURPOSES

Quantities Based on a One Mile Section

EXISTING ADT	NEEDS WIDTH	NEEDS GENERATION DATA	GRADING DEPTH (inches)	GRADING QUANTITY (cubic yards)	CLASS 5 GRAVEL BASE DEPTH (inches)	CLASS 5 GRAVEL BASE QUANTITY (Tons)	TOTAL BITUMINOUS QUANTITY (TONS)
0 EXISTING ADT & NON EXISTING	**26 FOOT ROADBED WIDTH**	2- 11' TRAFFIC LANES 0 PARKING LANES 2- 2' CURB REACTION	22 INCHES	**11,655**	6 INCHES	**4,346**	**2,917** 4 INCHES
1-499 EXISTING ADT	**28' FOOT ROADBED WIDTH**	2- 12' TRAFFIC LANES 0 PARKING LANES 2- 2' CURB REACTION	22 INCHES	**12,496**	6 INCHES	**4,691**	**3,182** 4 INCHES
500-1999 EXISTING ADT	**34 FOOT ROADBED WIDTH**	2- 12' TRAFFIC LANES 1- 8' PARKING LANE 1- 2' CURB REACTION	26 INCHES	**17,698**	10 INCHES	**10,176**	**3,978** 4 INCHES
2000-4999 EXISTING ADT	**40 FOOT ROADBED WIDTH**	2-12' TRAFFIC LANES 2- 8' PARKING LANE	32 INCHES	**25,188**	16 INCHES	**19,628**	**4,773** 4 INCHES
5000-8999 EXISTING ADT	**48 FOOT ROADBED WIDTH**	4-11' TRAFFIC LANES 2- 2' CURB REACTION	35 INCHES	**32,795**	19 INCHES	**27,907**	**5,834** 4 INCHES
9000-13,999 EXISTING ADT	**54 FOOT ROADBED WIDTH**	4-11' TRAFFIC LANES 1- 8' PARKING LANE 1- 2' CURB REACTION	36 INCHES	**37,918**	19 INCHES	**31,460**	**8,287** 5 INCHES
14,000-24,999 EXISTING ADT	**62 FOOT ROADBED WIDTH**	4-11' TRAFFIC LANES 1- 14' CENTER TURN 2- 2' CURB REACTION	38 INCHES	**45,838**	20 INCHES	**38,049**	**11,535** 6 INCHES
GT 25,000 EXISTING ADT	**70 FOOT ROADBED WIDTH**	6-11' TRAFFIC LANES 0 PARKING LANES 2- 2' CURB REACTION	39 INCHES	**53,172**	21 INCHES	**44,776**	**13,126** 6 INCHES

$0 per mile

$71,250 per mile

$142,500 per mile

$195,000 per mile

1/2 residential cost

Scenario #7

MSAS URBAN ADT GROUPS FOR NEEDS PURPOSES

Quantities Based on a One Mile Section

EXISTING ADT	NEEDS WIDTH	NEEDS GENERATION DATA	GRADING DEPTH (inches)	GRADING QUANTITY (cubic yards)	CLASS 5 GRAVEL BASE DEPTH (inches)	CLASS 5 GRAVEL BASE QUANTITY (Tons)	TOTAL BITUMINOUS QUANTITY (TONS)
0 EXISTING ADT & NON EXISTING	**26 FOOT ROADBED WIDTH**	2- 11' TRAFFIC LANES 0 PARKING LANES 2- 2' CURB REACTION	22 INCHES	**11,655**	6 INCHES	**4,346**	**2,917** 4 INCHES
1-499 EXISTING ADT	**28' FOOT ROADBED WIDTH**	2- 12' TRAFFIC LANES 0 PARKING LANES 2- 2' CURB REACTION	22 INCHES	**12,496**	6 INCHES	**4,691**	**3,182** 4 INCHES
500-1999 EXISTING ADT	**34 FOOT ROADBED WIDTH**	2- 12' TRAFFIC LANES 1- 8' PARKING LANE 1- 2' CURB REACTION	26 INCHES	**17,698**	10 INCHES	**10,176**	**3,978** 4 INCHES
2000-4999 EXISTING ADT	**40 FOOT ROADBED WIDTH**	2-12' TRAFFIC LANES 2- 8' PARKING LANE	32 INCHES	**25,188**	16 INCHES	**19,628**	**4,773** 4 INCHES
5000-8999 EXISTING ADT	**48 FOOT ROADBED WIDTH**	4-11' TRAFFIC LANES 2- 2' CURB REACTION	35 INCHES	**32,795**	19 INCHES	**27,907**	**5,834** 4 INCHES
9000-13,999 EXISTING ADT	**54 FOOT ROADBED WIDTH**	4-11' TRAFFIC LANES 1- 8' PARKING LANE 1- 2' CURB REACTION	36 INCHES	**37,918**	19 INCHES	**31,460**	**8,287** 5 INCHES
14,000-24,999 EXISTING ADT	**62 FOOT ROADBED WIDTH**	4-11' TRAFFIC LANES 1- 14' CENTER TURN 2- 2' CURB REACTION	38 INCHES	**45,838**	20 INCHES	**38,049**	**11,535** 6 INCHES
GT 25,000 EXISTING ADT	**70 FOOT ROADBED WIDTH**	6-11' TRAFFIC LANES 0 PARKING LANES 2- 2' CURB REACTION	39 INCHES	**53,172**	21 INCHES	**44,776**	**13,126** 6 INCHES

$0 per mile

$35,625 per mile

1/4 residential cost

$71,250 per mile

1/2 residential cost

$97,500 per mile

1/2 commericial cost

Scenario #8

MSAS URBAN ADT GROUPS FOR NEEDS PURPOSES

Quantities Based on a One Mile Section

	EXISTING ADT	NEEDS WIDTH	NEEDS GENERATION DATA	GRADING DEPTH (inches)	GRADING QUANTITY (cubic yards)	CLASS 5 GRAVEL BASE DEPTH (inches)	CLASS 5 GRAVEL BASE QUANTITY (Tons)	TOTAL BITUMINOUS QUANTITY (TONS)
$0 per mile	0 EXISTING ADT & NON EXISTING	26 FOOT ROADBED WIDTH	2- 11' TRAFFIC LANES 0 PARKING LANES 2- 2' CURB REACTION	22 INCHES	**11,655**	6 INCHES	**4,346**	**2,917** 4 INCHES
$47,500 per mile	1-499 EXISTING ADT	28' FOOT ROADBED WIDTH	2- 12' TRAFFIC LANES 0 PARKING LANES 2- 2' CURB REACTION	22 INCHES	**12,496**	6 INCHES	**4,691**	**3,182** 4 INCHES
$95,000 per mile	500-1999 EXISTING ADT	34 FOOT ROADBED WIDTH	2- 12' TRAFFIC LANES 1- 8' PARKING LANE 1- 2' CURB REACTION	26 INCHES	**17,698**	10 INCHES	**10,176**	**3,978** 4 INCHES
$142,500 per mile	highest 2000-4999 EXISTING ADT residential	40 FOOT ROADBED WIDTH	2-12' TRAFFIC LANES 2- 8' PARKING LANE	32 INCHES	**25,188**	16 INCHES	**19,628**	**4,773** 4 INCHES
			residential cost cutoff - prorate from here					
$155,625 per mile	5000-8999 EXISTING ADT	48 FOOT ROADBED WIDTH	4-11' TRAFFIC LANES 2- 2' CURB REACTION	35 INCHES	**32,795**	19 INCHES	**27,907**	**5,834** 4 INCHES
			AADT above 5000 - prorated from the commercial cost					
$168,750 per mile	9000-13,999 EXISTING ADT	54 FOOT ROADBED WIDTH	4-11' TRAFFIC LANES 1- 8' PARKING LANE 1- 2' CURB REACTION	36 INCHES	**37,918**	19 INCHES	**31,460**	**8,287** 5 INCHES
$181,875 per mile	14,000-24,999 EXISTING ADT	62 FOOT ROADBED WIDTH	4-11' TRAFFIC LANES 1- 14' CENTER TURN 2- 2' CURB REACTION	38 INCHES	**45,838**	20 INCHES	**38,049**	**11,535** 6 INCHES
$195,000 per mile	highest GT 25,000 EXISTING ADT commercial	70 FOOT ROADBED WIDTH	6-11' TRAFFIC LANES 0 PARKING LANES 2- 2' CURB REACTION	39 INCHES	**53,172**	21 INCHES	**44,776**	**13,126** 6 INCHES

$47,500 between traffic groups

$13,125 between traffic groups

Scenario #9

(same as #8 - prices just cut in half)

MSAS URBAN ADT GROUPS FOR NEEDS PURPOSES

Quantities Based on a One Mile Section

	EXISTING ADT	NEEDS WIDTH	NEEDS GENERATION DATA	GRADING DEPTH (inches)	GRADING QUANTITY (cubic yards)	CLASS 5 GRAVEL BASE DEPTH (inches)	CLASS 5 GRAVEL BASE QUANTITY (Tons)	TOTAL BITUMINOUS QUANTITY (TONS)
$0 per mile	**0 EXISTING ADT & NON EXISTING**	**26 FOOT ROADBED WIDTH**	2- 11' TRAFFIC LANES 0 PARKING LANES 2- 2' CURB REACTION	22 INCHES	**11,655**	6 INCHES	**4,346**	**2,917** 4 INCHES
$23,750 per mile	**1-499 EXISTING ADT**	**28' FOOT ROADBED WIDTH**	2- 12' TRAFFIC LANES 0 PARKING LANES 2- 2' CURB REACTION	22 INCHES	**12,496**	6 INCHES	**4,691**	**3,182** 4 INCHES
$47.500 per mile	**500-1999 EXISTING ADT**	**34 FOOT ROADBED WIDTH**	2- 12' TRAFFIC LANES 1- 8' PARKING LANE 1- 2' CURB REACTION	26 INCHES	**17,698**	10 INCHES	**10,176**	**3,978** 4 INCHES
$71,250 per mile	highest **2000-4999 EXISTING ADT** residential	**40 FOOT ROADBED WIDTH**	2-12' TRAFFIC LANES 2- 8' PARKING LANE	32 INCHES	**25,188**	16 INCHES	**19,628**	**4,773** 4 INCHES
$77,812 per mile	**5000-8999 EXISTING ADT**	**48 FOOT ROADBED WIDTH**	4-11' TRAFFIC LANES 2- 2' CURB REACTION	35 INCHES	**32,795**	19 INCHES	**27,907**	**5,834** 4 INCHES
$84,375 per mile	**9000-13,999 EXISTING ADT**	**54 FOOT ROADBED WIDTH**	4-11' TRAFFIC LANES 1- 8' PARKING LANE 1- 2' CURB REACTION	36 INCHES	**37,918**	19 INCHES	**31,460**	**8,287** 5 INCHES
$90,937 per mile	**14,000-24,999 EXISTING ADT**	**62 FOOT ROADBED WIDTH**	4-11' TRAFFIC LANES 1- 14' CENTER TURN 2- 2' CURB REACTION	38 INCHES	**45,838**	20 INCHES	**38,049**	**11,535** 6 INCHES
$97,500 per mile	highest **GT 25,000 EXISTING ADT** commercial	**70 FOOT ROADBED WIDTH**	6-11' TRAFFIC LANES 0 PARKING LANES 2- 2' CURB REACTION	39 INCHES	**53,172**	21 INCHES	**44,776**	**13,126** 6 INCHES

$23,750 between traffic groups

$6,562.50 between traffic groups

Scenario #10

MSAS URBAN ADT GROUPS FOR NEEDS PURPOSES

Quantities Based on a One Mile Section

	EXISTING ADT	NEEDS WIDTH	NEEDS GENERATION DATA	GRADING DEPTH (inches)	GRADING QUANTITY (cubic yards)	CLASS 5 GRAVEL BASE DEPTH (inches)	CLASS 5 GRAVEL BASE QUANTITY (Tons)	TOTAL BITUMINOUS QUANTITY (TONS)
$0 per mile	**0 EXISTING ADT & NON EXISTING**	**26 FOOT ROADBED WIDTH**	2- 11' TRAFFIC LANES 0 PARKING LANES 2- 2' CURB REACTION	22 INCHES	**11,655**	6 INCHES	**4,346**	**2,917** 4 INCHES
$27,857 per mile	**1-499 EXISTING ADT**	**28' FOOT ROADBED WIDTH**	2- 12' TRAFFIC LANES 0 PARKING LANES 2- 2' CURB REACTION	22 INCHES	**12,496**	6 INCHES	**4,691**	**3,182** 4 INCHES
$55,714 per mile	**500-1999 EXISTING ADT**	**34 FOOT ROADBED WIDTH**	2- 12' TRAFFIC LANES 1- 8' PARKING LANE 1- 2' CURB REACTION	26 INCHES	**17,698**	10 INCHES	**10,176**	**3,978** 4 INCHES
$83,571 per mile	**2000-4999 EXISTING ADT**	**40 FOOT ROADBED WIDTH**	2-12' TRAFFIC LANES 2- 8' PARKING LANE	32 INCHES	**25,188**	16 INCHES	**19,628**	**4,773** 4 INCHES
$111,429 per mile	**5000-8999 EXISTING ADT**	**48 FOOT ROADBED WIDTH**	4-11' TRAFFIC LANES 2- 2' CURB REACTION	35 INCHES	**32,795**	19 INCHES	**27,907**	**5,834** 4 INCHES
$139,286 per mile	**9000-13,999 EXISTING ADT**	**54 FOOT ROADBED WIDTH**	4-11' TRAFFIC LANES 1- 8' PARKING LANE 1- 2' CURB REACTION	36 INCHES	**37,918**	19 INCHES	**31,460**	**8,287** 5 INCHES
$167,143 per mile	**14,000-24,999 EXISTING ADT**	**62 FOOT ROADBED WIDTH**	4-11' TRAFFIC LANES 1- 14' CENTER TURN 2- 2' CURB REACTION	38 INCHES	**45,838**	20 INCHES	**38,049**	**11,535** 6 INCHES
$195,000 per mile	highest **GT 25,000 EXISTING ADT** commercial	**70 FOOT ROADBED WIDTH**	6-11' TRAFFIC LANES 0 PARKING LANES 2- 2' CURB REACTION	39 INCHES	**53,172**	21 INCHES	**44,776**	**13,126** 6 INCHES

about $27,857 between traffic groups

Scenario #11

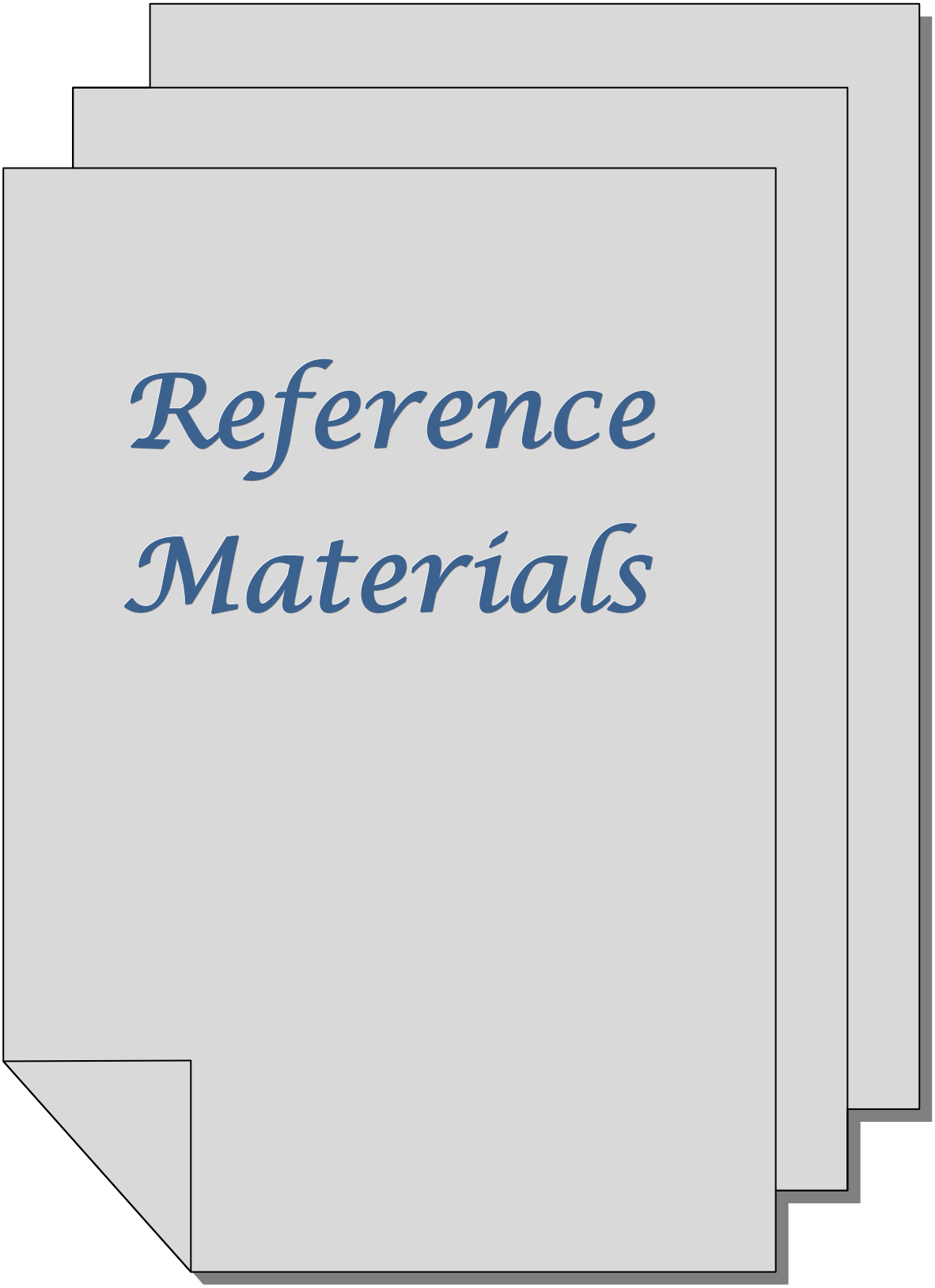
(same as #10 - prices just cut in half)

MSAS URBAN ADT GROUPS FOR NEEDS PURPOSES

Quantities Based on a One Mile Section

	EXISTING ADT	NEEDS WIDTH	NEEDS GENERATION DATA	GRADING DEPTH (inches)	GRADING QUANTITY (cubic yards)	CLASS 5 GRAVEL BASE DEPTH (inches)	CLASS 5 GRAVEL BASE QUANTITY (Tons)	TOTAL BITUMINOUS QUANTITY (TONS)
$0 per mile	**0 EXISTING ADT & NON EXISTING**	**26 FOOT ROADBED WIDTH**	2- 11' TRAFFIC LANES 0 PARKING LANES 2- 2' CURB REACTION	22 INCHES	**11,655**	6 INCHES	**4,346**	**2,917** 4 INCHES
$13,929 per mile	**1-499 EXISTING ADT**	**28' FOOT ROADBED WIDTH**	2- 12' TRAFFIC LANES 0 PARKING LANES 2- 2' CURB REACTION	22 INCHES	**12,496**	6 INCHES	**4,691**	**3,182** 4 INCHES
$27,857 per mile	**500-1999 EXISTING ADT**	**34 FOOT ROADBED WIDTH**	2- 12' TRAFFIC LANES 1- 8' PARKING LANE 1- 2' CURB REACTION	26 INCHES	**17,698**	10 INCHES	**10,176**	**3,978** 4 INCHES
$41,786 per mile	highest **2000-4999 EXISTING ADT** residential	**40 FOOT ROADBED WIDTH**	2-12' TRAFFIC LANES 2- 8' PARKING LANE	32 INCHES	**25,188**	16 INCHES	**19,628**	**4,773** 4 INCHES
$55,714 per mile	**5000-8999 EXISTING ADT**	**48 FOOT ROADBED WIDTH**	4-11' TRAFFIC LANES 2- 2' CURB REACTION	35 INCHES	**32,795**	19 INCHES	**27,907**	**5,834** 4 INCHES
$69,643 per mile	**9000-13,999 EXISTING ADT**	**54 FOOT ROADBED WIDTH**	4-11' TRAFFIC LANES 1- 8' PARKING LANE 1- 2' CURB REACTION	36 INCHES	**37,918**	19 INCHES	**31,460**	**8,287** 5 INCHES
$83,571 per mile	**14,000-24,999 EXISTING ADT**	**62 FOOT ROADBED WIDTH**	4-11' TRAFFIC LANES 1- 14' CENTER TURN 2- 2' CURB REACTION	38 INCHES	**45,838**	20 INCHES	**38,049**	**11,535** 6 INCHES
$97,500 per mile	highest **GT 25,000 EXISTING ADT** commercial	**70 FOOT ROADBED WIDTH**	6-11' TRAFFIC LANES 0 PARKING LANES 2- 2' CURB REACTION	39 INCHES	**53,172**	21 INCHES	**44,776**	**13,126** 6 INCHES

$13,928.57 between traffic groups


Reference
Materials

8820.0700 MSAS SELECTION CRITERIA

(Subpart. 3) Municipal state-aid street. A municipal state-aid street may be selected if it:

A. is projected to carry a relatively heavier traffic volume or is functionally classified as collector or arterial as identified on the urban municipality's functional classification plan;

B. connects the points of major traffic interest, parks, parkways, or recreational areas within an urban municipality; and

C. provides an integrated street system affording, within practical limits, a state-aid street network consistent with projected traffic demands.

2023 CONSTRUCTION AND MAINTENANCE ALLOTMENTS

25-Apr-23

MUNICIPALITY	TOTAL APPORTIONMENT	REQUESTED AMOUNT FOR MAINTENANCE	GENERAL MAINTENANCE ALLOTMENT	AMOUNT OF BOND INTEREST APPLIED TO GENERAL MAINTENANCE ALLOTMENT	TOTAL MAINTENANCE ALLOTMENT	CONSTRUCTION ALLOTMENT
Albert Lea	$1,134,622	25%	$283,656		**$283,656**	**$850,966**
Albertville	395,909	$1500/improved mile	11,535		**11,535**	**384,374**
Alexandria	1,265,054	25%	316,264		**316,264**	**948,790**
Andover	1,777,100	25%	444,275		**444,275**	**1,332,825**
Anoka	915,375	25%	228,844		**228,844**	**686,531**
Apple Valley	2,580,680	25%	645,170		**645,170**	**1,935,510**
Arden Hills	425,421	25%	106,355		**106,355**	**319,066**
Austin	1,534,090	Lump Sum	95,000		**95,000**	**1,439,090**
Baxter	719,052	25%	179,763		**179,763**	**539,289**
Belle Plaine *	427,572	$1500/improved mile	12,870	$14,100	**26,970**	**400,602**
Bemidji	924,565	25%	231,141		**231,141**	**693,424**
Big Lake	563,669	25%	140,917	16,078	**156,995**	**406,674**
Blaine	3,310,870	25%	827,718		**827,718**	**2,483,152**
Bloomington	4,816,708	35%	1,685,848		**1,685,848**	**3,130,860**
Brainerd	952,025	25%	238,006		**238,006**	**714,019**
Brooklyn Center	1,520,123	25%	380,031		**380,031**	**1,140,092**
Brooklyn Park	3,988,768	25%	997,192		**997,192**	**2,991,576**
Buffalo	968,453	25%	242,113		**242,113**	**726,340**
Burnsville	3,086,573	25%	771,643		**771,643**	**2,314,930**
Byron	357,674	$1500/improved mile	10,695		**10,695**	**346,979**
Cambridge	719,809	Lump Sum	50,000		**50,000**	**669,809**
Carver	248,266	$1500/improved mile	7,755		**7,755**	**240,511**
Champlin	1,167,592	25%	291,898		**291,898**	**875,694**
Chanhassen	1,284,997	25%	321,249		**321,249**	**963,748**
Chaska	1,311,657	25%	327,914		**327,914**	**983,743**
Chisago City	323,742	25%	80,936		**80,936**	**242,806**
Chisholm	317,416	25%	79,354		**79,354**	**238,062**
Circle Pines	210,982	$1500/improved mile	4,860	1,800	**6,660**	**204,322**
Cloquet	855,820	35%	299,537		**299,537**	**556,283**
Columbia Heights ^	874,061	25%	218,515		**218,515**	**655,546**
Coon Rapids	3,053,629	Lump Sum	134,125	61,625	**195,750**	**2,857,879**
Corcoran	499,824	35%	174,938		**174,938**	**324,886**
Cottage Grove	2,017,970	$1500/improved mile	49,500		**49,500**	**1,968,470**
Credit River	355,865	25%	88,966		**88,966**	**266,899**
Crookston ^	502,972	25%	125,743		**125,743**	**377,229**
Crystal	1,002,334	25%	250,584		**250,584**	**751,750**

MUNICIPALITY	TOTAL APPORTIONMENT	REQUESTED AMOUNT FOR MAINTENANCE	GENERAL MAINTENANCE ALLOTMENT	AMOUNT OF BOND INTEREST APPLIED TO GENERAL MAINTENANCE ALLOTMENT	TOTAL MAINTENANCE ALLOTMENT	CONSTRUCTION ALLOTMENT
Dayton	$467,994	25%	$116,999		**$116,999**	**$350,995**
Delano	317,147	25%	79,287		**79,287**	**237,860**
Detroit Lakes	904,442	25%	226,111		**226,111**	**678,331**
Duluth	5,777,486	Lump Sum	1,533,400	$36,150	**1,569,550**	**4,207,936**
Eagan	3,311,444	$1500/improved mile	73,995	33,412	**107,407**	**3,204,037**
East Bethel	855,240	25%	213,810		**213,810**	**641,430**
East Grand Forks	735,219	25%	183,805	85,019	**268,824**	**466,395**
Eden Prairie	3,181,457	Lump Sum	500,000		**500,000**	**2,681,457**
Edina	2,703,933	25%	675,983	809,584	**1,485,567**	**1,218,366**
Elk River	1,725,796	25%	431,449		**431,449**	**1,294,347**
Fairmont	793,325	25%	198,331		**198,331**	**594,994**
Falcon Heights ^	213,416	25%	53,354		**53,354**	**160,062**
Faribault	1,448,585	25%	362,146	22,980	**385,126**	**1,063,459**
Farmington *	1,029,565	25%	257,391		**257,391**	**772,174**
Fergus Falls	1,107,409	25%	276,852		**276,852**	**830,557**
Forest Lake	1,325,392	25%	331,348		**331,348**	**994,044**
Fridley ^	1,345,618	35%	470,966		**470,966**	**874,652**
Glencoe	345,518	Lump Sum	25,000	22,975	**47,975**	**297,543**
Golden Valley	1,281,762	25%	320,441	31,247	**351,688**	**930,074**
Grand Rapids	956,131	25%	239,033	32,025	**271,058**	**685,073**
Ham Lake	1,108,289	25%	277,072		**277,072**	**831,217**
Hastings	1,191,347	25%	297,837		**297,837**	**893,510**
Hermantown	736,248	Lump Sum	65,000		**65,000**	**671,248**
Hibbing	1,575,056	25%	393,764	29,000	**422,764**	**1,152,292**
Hopkins	798,586	25%	199,647		**199,647**	**598,939**
Hugo	910,862	25%	227,716		**227,716**	**683,146**
Hutchinson	938,347	$1500/improved mile	29,280		**29,280**	**909,067**
International Falls	321,105	$1500/improved mile	12,585		**12,585**	**308,520**
Inver Grove Heights	1,831,150	25%	457,788		**457,788**	**1,373,362**
Isanti	326,469	25%	81,617		**81,617**	**244,852**
Jordan	332,275	25%	83,069		**83,069**	**249,206**
Kasson	339,216	25%	84,804		**84,804**	**254,412**
LaCrescent	256,251	25%	64,063		**64,063**	**192,188**
Lake City	316,043	25%	79,011		**79,011**	**237,032**
Lake Elmo	808,879	25%	202,220		**202,220**	**606,659**
Lakeville	3,928,101	Lump Sum	120,000	126,394	**246,394**	**3,681,707**
Lino Lakes	1,066,065	25%	266,516		**266,516**	**799,549**
Litchfield	361,955	25%	90,489		**90,489**	**271,466**
Little Canada	550,357	25%	137,589		**137,589**	**412,768**
Little Falls	675,459	$1500/improved mile	29,820		**29,820**	**645,639**
Mahtomedi	421,633	25%	105,408		**105,408**	**316,225**
Mankato	2,494,354	25%	623,589		**623,589**	**1,870,765**
Maple Grove	3,511,188	25%	877,797		**877,797**	**2,633,391**

MUNICIPALITY	TOTAL APPORTIONMENT	REQUESTED AMOUNT FOR MAINTENANCE	GENERAL MAINTENANCE ALLOTMENT	AMOUNT OF BOND INTEREST APPLIED TO GENERAL MAINTENANCE ALLOTMENT	TOTAL MAINTENANCE ALLOTMENT	CONSTRUCTION ALLOTMENT
Maplewood	$2,041,412	Lump Sum	$275,000	$19,706	**$294,706**	**$1,746,706**
Marshall	$893,449	$1500/improved mile	$29,160	66,300	**$95,460**	**$797,989**
Medina	445,275	25%	111,319		**111,319**	**333,956**
Mendota Heights	677,629	25%	169,407		**169,407**	**508,222**
Minneapolis	18,969,004	35%	6,639,151		**6,639,151**	**12,329,853**
Minnetonka	2,775,691	25%	693,923		**693,923**	**2,081,768**
Minnetrista	479,474	25%	119,869		**119,869**	**359,605**
Montevideo	339,131	$1500/improved mile	13,710		**13,710**	**325,421**
Monticello	782,141	25%	195,535		**195,535**	**586,606**
Moorhead	2,901,486	25%	725,372		**725,372**	**2,176,114**
Morris	332,377	25%	83,094		**83,094**	**249,283**
Mound	422,949	25%	105,737		**105,737**	**317,212**
Mounds View	594,698	25%	148,675		**148,675**	**446,023**
New Brighton	964,117	25%	241,029		**241,029**	**723,088**
New Hope	927,146	25%	231,787		**231,787**	**695,359**
New Prague	428,541	25%	107,135		**107,135**	**321,406**
New Ulm	814,524	$1500/improved mile	27,015		**27,015**	**787,509**
North Branch	888,958	25%	222,240	2,240	**224,480**	**664,478**
North Mankato	826,916	25%	206,729	10,100	**216,829**	**610,087**
North St. Paul	589,490	25%	147,373		**147,373**	**442,117**
Northfield	975,553	25%	243,888		**243,888**	**731,665**
Oak Grove	802,857	25%	200,714		**200,714**	**602,143**
Oakdale	1,297,751	25%	324,438		**324,438**	**973,313**
Orono	459,573	25%	114,893		**114,893**	**344,680**
Otsego	1,184,399	25%	296,100		**296,100**	**888,299**
Owatonna	1,637,094	Lump Sum	125,500		**125,500**	**1,511,594**
Plymouth	4,318,230	25%	1,079,558		**1,079,558**	**3,238,672**
Princeton (new city)	268,393	25%	67,098		**67,098**	**201,295**
Prior Lake	1,298,324	35%	454,413		**454,413**	**843,911**
Ramsey	1,543,201	25%	385,800		**385,800**	**1,157,401**
Red Wing	1,114,317	35%	390,011		**390,011**	**724,306**
Redwood Falls	365,365	25%	91,341		**91,341**	**274,024**
Richfield	1,779,836	25%	444,959		**444,959**	**1,334,877**
Robbinsdale	651,241	25%	162,810		**162,810**	**488,431**
Rochester	7,227,114	Lump Sum	1,200,000		**1,200,000**	**6,027,114**
Rogers	932,809	25%	233,202		**233,202**	**699,607**
Rosemount	1,450,252	25%	362,563		**362,563**	**1,087,689**
Roseville	1,711,482	25%	427,871		**427,871**	**1,283,611**
Sartell	1,057,126	$1500/improved mile	28,380		**28,380**	**1,028,746**
Sauk Rapids	802,250	$1500/improved mile	21,555		**21,555**	**780,695**

MUNICIPALITY	TOTAL APPORTIONMENT	REQUESTED AMOUNT FOR MAINTENANCE	GENERAL MAINTENANCE ALLOTMENT	AMOUNT OF BOND INTEREST APPLIED TO GENERAL MAINTENANCE ALLOTMENT	TOTAL MAINTENANCE ALLOTMENT	CONSTRUCTION ALLOTMENT
Savage	$1,550,291	$1500/improved mile	$38,130		**$38,130**	**$1,512,161**
Shakopee	2,287,112	25%	571,778		**571,778**	**1,715,334**
Shoreview	1,161,601	25%	290,400		**290,400**	**871,201**
Shorewood	427,382	25%	106,846		**106,846**	**320,536**
South St. Paul ^	1,065,539	25%	266,385		**266,385**	**799,154**
Spring Lake Park	342,363	25%	85,591		**85,591**	**256,772**
St. Anthony	419,257	25%	104,814		**104,814**	**314,443**
St. Cloud	3,929,904	25%	982,476		**982,476**	**2,947,428**
St. Francis	464,435	25%	116,109		**116,109**	**348,326**
St. Joseph	381,676	25%	95,419		**95,419**	**286,257**
St. Louis Park	2,377,371	35%	832,080	125,050	**957,130**	**1,420,241**
St. Michael	1,077,692	25%	269,423		**269,423**	**808,269**
St. Paul	14,311,900	Lump Sum	3,700,000		**3,700,000**	**10,611,900**
St. Paul Park	299,144	25%	74,786		**74,786**	**224,358**
St. Peter	686,852	$1500/improved mile	21,660	54,000	**75,660**	**611,192**
Stewartville	274,728	25%	68,682		**68,682**	**206,046**
Stillwater	974,840	25%	243,710		**243,710**	**731,130**
Thief River Falls	697,365	25%	174,341		**174,341**	**523,024**
Vadnais Heights	583,394	25%	145,849		**145,849**	**437,545**
Victoria	471,372	25%	117,843		**117,843**	**353,529**
Virginia	638,453	25%	159,613	57,300	**216,913**	**421,540**
Waconia	738,274	25%	184,569		**184,569**	**553,705**
Waite Park	449,087	$1500/improved mile	11,655		**11,655**	**437,432**
Waseca	423,585	25%	105,896		**105,896**	**317,689**
West St. Paul	899,530	25%	224,883		**224,883**	**674,647**
White Bear Lake	1,161,113	25%	290,278		**290,278**	**870,835**
Willmar	1,371,075	25%	342,769		**342,769**	**1,028,306**
Winona	1,367,865	25%	341,966		**341,966**	**1,025,899**
Woodbury	3,808,978	25%	952,245		**952,245**	**2,856,733**
Worthington	654,836	Lump Sum	100,000		**100,000**	**554,836**
Wyoming	566,392	25%	141,598		**141,598**	**424,794**
Zimmerman	296,689	$1500/improved mile	9,135		**9,135**	**287,554**
TOTAL	**$215,169,023**		**$50,050,575**	**$1,657,085**	**$51,707,660**	**$163,461,363**

GENERAL MAINTENANCE ALLOTMENT OPTIONS:

19	**Cities requested $1,500 per Improved Mile**	**total excluding 1st class cities**	**$130,284,560**
111	**Cities requested 25% of Total Apportionment**	**excess balance threshhold is avg X 3 (147 cities left)**	**$2,658,869**
8	**Cities requested 35% of Total Apportionment**	**can't go down: use 2022 balance floor**	**$2,744,754**
13	**Cities requested a Lump Sum amount > $1,500/ Improved Mile and < 35% of Total Allotment**		

TOTAL MAINTENANCE ALLOTMENT: General Maintenance Allotment Option (selected by the city) plus bond interest due, if any

** changed Maintenance Request for 2023*

^ Certified Complete City. Portion of Construction Allotment will go to 90P account

CURRENT RESOLUTIONS
OF THE
MUNICIPAL SCREENING BOARD

October 2022

Bolded wording (except headings) are revisions since the last publication of the Resolutions

BE IT RESOLVED:

ADMINISTRATION

Appointments to Screening Board - Oct. 1961 (Revised June 1981, May 2011)

The Commissioner of Mn/DOT will annually be requested to appoint three (3) new members, upon recommendation of the City Engineers Association of Minnesota, to serve three (3) year terms as voting members of the Municipal Screening Board. These appointees are selected from the MnDOT State Aid Districts as they exist in 2010, together with one representative from each of the four (4) cities of the first class.

Screening Board Chair, Vice Chair and Secretary- June 1987 (Revised June, 2002)

The Chair Vice Chair, and Secretary**,** nominated annually at the annual meeting of the City Engineers Association of Minnesota and subsequently appointed by the Commissioner of the Minnesota Department of Transportation will not have a vote in matters before the Screening Board unless they are also the duly appointed Screening Board Representative of a construction District or of a City of the first class.

Appointment to the Needs Study Subcommittee - June 1987 (Revised June 1993)

The Screening Board Chair will annually appoint one city engineer, who has served on the Screening Board, to serve a three year term on the Needs Study Subcommittee. The appointment will be made at the annual winter meeting of the City's Engineers Association. The appointed subcommittee person will serve as chair of the subcommittee in the third year of the appointment.

Appointment to Unencumbered Construction Funds Subcommittee – (Revised June 1979, May 2014)

The Screening Board past Chair will be appointed to serve a minimum three-year term on the Unencumbered Construction Fund Subcommittee. This appointment will continue to maintain an experienced group to follow a program of accomplishments. The most senior member will serve as chair of the subcommittee.

Appearance Screening Board - Oct. 1962 (Revised Oct. 1982)

Any individual or delegation having items of concern regarding the study of State Aid Needs or State Aid Apportionment amounts, and wishing to have consideration given to these items, will send such request in writing to the State Aid Engineer. The State Aid Engineer with concurrence of the Chair of the Screening Board will determine which requests are to be referred to the Screening Board for their consideration. This resolution does not abrogate the right of the Screening Board to call any person or persons before the Board for discussion purposes.

Screening Board Meeting Dates and Locations - June 1996

The Screening Board Chair, with the assistance of the State Aid Engineer, will determine the dates and locations for Screening Board meetings.

Research Account - Oct. 1961

An annual resolution be considered for setting aside up to ½ of 1% of the previous years' Apportionment fund for the Research Account to continue municipal street research activity.

Population Apportionment - October 1994, 1996

Beginning with calendar year 1996, the MSAS population apportionment will be determined using the latest available federal census or population estimates of the State Demographer and/or the Metropolitan Council. However, no population will be decreased below that of the latest available federal census, and no city will be dropped from the MSAS eligible list based on population estimates.

Improper Needs Report - Oct. 1961

The State Aid Engineer and the District State Aid Engineer (DSAE) are requested to recommend an adjustment of the Needs reporting whenever there is a reason to believe that said reports have deviated from accepted standards and to submit their recommendations to the Screening Board, with a copy to the municipality involved, or its engineer.

New Cities Needs - Oct. 1983 (Revised June 2005, May 2014)

Any new city having determined its eligible mileage, but has not submitted its Needs to the DSAE by December 1, will have its Needs based upon zero ADT assigned to the eligible mileage until the DSAE approves the traffic counts.

Certified Complete Cities – May 2014 (Revised October 2014)
State Aid Operational Rule 8820.18 subp.2 allows cities to spend the population based portion of their Construction Allotment on non MSAS city streets if its MSAS system has been Certified Complete.

At the city's request, the District State Aid Engineer will review the MSAS system in that city and if the system has been completely built, may certify it complete for a period of two years.
The same proportion of a city's total allocation based on population will be used to compute the population portion of its Construction Allotment.

If a payment request for a project on the MSAS system is greater than the amount available in the Needs based account, the remainder will come from the population based account, thereby reducing the amount available for non MSAS city streets.

A city may carry over any remaining amount in its population based account from year to year. However if a payment request for a project on a non MSAS city street is greater than the amount available in the population based account, the population based account will be reduced to zero and the city will be responsible for the remaining amount.

Construction Needs Components – May 2014

For Construction Needs purposes, all roadways on the MSAS system will be considered as being built to Urban standards.
All segments on the MSAS system will generate continuous Construction Needs on the following items:
Excavation/Grading
Gravel Base
Bituminous
Curb and Gutter Construction
Sidewalk Construction
Storm Sewer Construction
Street Lighting
Traffic Signals
Engineering
Structures

Unit Price Study- Oct. 2006 (Revised May, 2014)

The Needs Study Subcommittee will annually review the Unit Prices for the Needs components used in the Needs Study. The Subcommittee will make its recommendation to the Municipal Screening board at its annual spring meeting.

The Unit Price Study go to a 3 year (or triennial) cycle with the Unit Prices for the two 'off years' to be set using the Engineering News Record construction cost index on all items where a Unit Price is not estimated and provided by other MnDOT offices. The Screening Board may request a Unit Price Study on individual items in the 'off years' if it is deemed necessary.

Unit Costs – May 2014, (Revised January 2015, May 2015)

The quantities which the Unit Costs for Excavation/Grading, Gravel Base, and Bituminous are based upon will be determined by using the roadway cross sections and structural sections in each of the ADT groups as determined by the Municipal Screening Board and shown in the following table 'MSAS Urban ADT Groups for Needs Purposes'.

MSAS URBAN ADT GROUPS FOR NEEDS PURPOSES

Quantities Based on a One Mile Section

EXISTING ADT	NEEDS WIDTH	NEEDS GENERATION DATA	GRADING DEPTH (inches)	GRADING QUANTITY (cubic yards)	CLASS 5 GRAVEL BASE DEPTH (inches)	CLASS 5 GRAVEL BASE QUANTITY (Tons)	TOTAL BITUMINOUS QUANTITY (TONS)
0 EXISTING ADT & NON EXISTING	**26 FOOT ROADBED WIDTH**	2- 11' TRAFFIC LANES 0 PARKING LANES 2- 2' CURB REACTION	22 INCHES	**11,655**	6 INCHES	**4,346**	**2,917** 4 INCHES
1-499 EXISTING ADT	**28' FOOT ROADBED WIDTH**	2- 12' TRAFFIC LANES 0 PARKING LANES 2- 2' CURB REACTION	22 INCHES	**12,496**	6 INCHES	**4,691**	**3,182** 4 INCHES
500-1999 EXISTING ADT	**34 FOOT ROADBED WIDTH**	2- 12' TRAFFIC LANES 1- 8' PARKING LANE 1- 2' CURB REACTION	26 INCHES	**17,698**	10 INCHES	**10,176**	**3,978** 4 INCHES
2000-4999 EXISTING ADT	**40 FOOT ROADBED WIDTH**	2-12' TRAFFIC LANES 2- 8' PARKING LANE	32 INCHES	**25,188**	16 INCHES	**19,628**	**4,773** 4 INCHES
5000-8999 EXISTING ADT	**48 FOOT ROADBED WIDTH**	4-11' TRAFFIC LANES 2- 2' CURB REACTION	35 INCHES	**32,795**	19 INCHES	**27,907**	**5,834** 4 INCHES
9000-13,999 EXISTING ADT	**54 FOOT ROADBED WIDTH**	4-11' TRAFFIC LANES 1- 8' PARKING LANE 1- 2' CURB REACTION	36 INCHES	**37,918**	19 INCHES	**31,460**	**8,287** 5 INCHES
14,000-24,999 EXISTING ADT	**62 FOOT ROADBED WIDTH**	4-11' TRAFFIC LANES 1- 14' CENTER TURN 2- 2' CURB REACTION	38 INCHES	**45,838**	20 INCHES	**38,049**	**11,535** 6 INCHES
GT 25,000 EXISTING ADT	**70 FOOT ROADBED WIDTH**	6-11' TRAFFIC LANES 0 PARKING LANES 2- 2' CURB REACTION	39 INCHES	**53,172**	21 INCHES	**44,776**	**13,126** 6 INCHES

The quantity used for **Curb and Gutter** Construction will be determined by multiplying the segment length times two if it is an undivided roadway and by four if it is divided.
This quantity will then be multiplied by the Municipal Screening Board approved Unit Price to determine the Curb and Gutter Construction Needs.

The quantity used for **Sidewalk Construction** will be determined by multiplying the segment length times 26,400 (a five foot wide sidewalk on one side of a mile of roadway) in the lower two ADT groups (less than 500 ADT) and by 52,800 (two five foot wide sidewalks on a mile of roadway) in the upper ADT groups.
This quantity will then be multiplied by the Municipal Screening Board approved Unit Price to determine the Sidewalk Construction Needs.

The Unit Cost per mile of **Storm Sewer** for the highest MSAS Urban ADT Group for Needs Purposes will be based on the average costs of all Storm Sewer Construction on the MSAS system in the previous year. To determine the Unit Cost for the highest ADT Group, average costs for Complete Storm Sewer projects and Partial Storm Sewer projects will be provided to State Aid by the MnDOT Hydraulics Office and then added together and divided by two to calculate a statewide average Unit Cost for all Storm Sewer Construction.
The Unit Cost per mile for Storm Sewer Construction will be calculated for the highest MSAS Urban ADT Group and be prorated downward for the other ADT Groups. This proration has been determined based upon an engineering study requested by the Municipal Screening Board in 2011 and will be the basis for the Needs calculations.

The Unit Cost for **Street Lighting** will be determined by multiplying the Unit Price per mile by the segment length. This Unit Cost will remain at $100,000 per mile. The Municipal Screening Board may request a study on this item on any year if it is deemed necessary.

The Unit Cost for **Traffic Signals** will be determined by the recommendation by the SALT Program Support Engineer and approved by the MSB.
The Unit Cost for traffic signals will be based on a cost per signal leg, and for Needs purposes a signal leg will be defined as ¼ of the signal cost.
Only signal legs on designated MSAS routes will be included in the Needs study.
Stand-alone pedestrian crossing signals will not be included in the Needs study.

The area in square feet used for **Structure Needs** (Bridges and Box Culverts) will be determined by multiplying the centerline length of the bridge, or the culvert width of the box culvert, times the Needs Width from the appropriate MSAS Urban ADT Group. This quantity will then be multiplied by the Municipal Screening Board Unit Price to determine the Structure Needs. The Unit Price for Structures will be determined by using one-half of the approved unit cost provided by the MnDOT State Aid Bridge Office.

The Unit Cost for **Engineering** will be determined by adding together all other Unit Costs and multiplying them by the MSB approved percentage. The result is added to the other Unit Costs.

2022 UNIT PRICE RECOMMENDATIONS

for the January 2023 distribution

Needs Item		Municipal Screening Board Approved Prices for the 2022 Distribution	Needs Study Subcommittee Recommended Prices for 2023 Distribution	Municipal Screening Board Approved Prices for the 2023 Distribution
Grading (Excavation)	Cu. Yd.	$10.64	$11.43	**$11.43**
Aggregate Base	Ton	18.00	19.33	**19.33**
All Bituminous	Ton	72.00	77.33	**77.33**
Sidewalk Construction	Sq. Ft.	7.24	7.78	**7.78**
Curb and Gutter Construction	Lin.Ft.	20.00	21.48	**21.48**
Traffic Signals	Per Sig	231,875	249,034	**249,034**
Street Lighting	Mile	100,000	100,000	**100,000**
Engineering	Percent	22	22	**22**
All Structures (includes both bridges and box culverts)	Sq. Ft.	90.70	98.58	**98.58**
Storm Sewer (based on ADT)	Per Mile			
0 ADT & Non Existing		185,600	199,400	**199,400**
1-499		189,200	203,200	**203,200**
500-1,999		199,700	214,500	**214,500**
2,000-4,999		210,300	225,900	**225,900**
5,000-8,999		224,400	241,000	**241,000**
9,000-13,999		235,000	252,400	**252,400**
14,000-24,999		249,100	267,600	**267,600**
25,000 and over		263,200	282,700	**282,700**

Mileage - Feb. 1959 (Revised Oct. 1994. 1998)

The maximum mileage for Municipal State Aid Street designation will be 20 percent of the municipality's basic mileage - which is comprised of the total improved mileage of local streets, county roads and county road turnbacks.

Nov. 1965 – (Revised 1969, October 1993, October 1994, June 1996, October 1998, May 2014)

That the maximum mileage for State Aid designation may be exceeded to designate trunk highway turnbacks released to the Municipality after July 1, 1965.
The maximum mileage for State Aid designation may also be exceeded to designate both County Road and County State Aid Highways released to the Municipality after May 11th, 1994.

Nov. 1965 (Revised 1972, Oct. 1993, 1995, 1998)

The maximum mileage for Municipal State Aid Street designation will be based on the Annual Certification of Mileage current as of December 31st of the preceding year. Submittal of a supplementary certification during the year will not be permitted. Frontage roads not designated Trunk Highway, Trunk Highway Turnback or County State Aid Highways will be considered in the computation of the basic street mileage. The total mileage of local streets, county roads and county road turnbacks on corporate limits will be included in the municipality's basic street mileage. Any State Aid Street that is on the boundary of two adjoining urban municipalities will be considered as one-half mileage for each municipality.

All mileage on the MSAS system will accrue Needs in accordance with current rules and resolutions.

Oct. 1961 (Revised May 1980, Oct. 1982, Oct. 1983, June 1993, June 2003)

All requests for revisions to the Municipal State Aid System must be received by the District State Aid Engineer by March first to be included in that years Needs Study. If a system revision has been requested, a City Council resolution approving the system revisions and the Needs Study reporting data must be received by May first, to be included in the current year's Needs Study. If no system revisions are requested, the District State Aid Engineer must receive the Normal Needs Updates by March 31st to be included in that years' Needs Study.

One Way Street Mileage - June 1983 (Revised Oct. 1984, Oct. 1993, June 1994, Oct. 1997)

Any one-way streets added to the Municipal State Aid Street system must be reviewed by the Needs Study Sub-Committee, and approved by the Screening Board before any one-way street can be treated as one-half mileage in the Needs Study.

All Municipal Screening Board approved one-way streets be treated as one-half of the mileage and allow one-half complete Needs. When Trunk Highway or County Highway Turnback is used as part of a one-way pair, mileage for certification shall only be included as Trunk Highway or County Turnback mileage and not as approved one-way mileage.

Needs Adjustments

In the event that an MSAS route earning "After the Fact" Needs is removed from the MSAS system, the "After the Fact" Needs will then be removed from the Needs Study, except if transferred to another state system. No adjustment will be required on Needs earned prior to the revocation.

Excess Unencumbered Construction Fund Balance Adjustment – Oct. 2002, (Revised Jan. 2010, May 2014, May 2019, October 2021, *June 2022*)

State Aid Payment Requests received before December 1st by the District State Aid Engineer for payment will be considered as being encumbered and the construction balances will be so adjusted.

The December 31 construction fund balance will be compared to the annual construction allotment from January of the same year. If the December 31 construction fund balance exceeds 3 times the January construction allotment, and the construction fund balance is over 3 times the average construction allotment for all cities excluding cities of the first class (hereinafter referred to as the adjusted average construction allotment), then the negative adjustment to the Needs will be 1 times the December 31 construction fund balance. In each consecutive year the December 31 construction fund balance exceeds 3 times the January construction allotment (and the balance is over 3 times the adjusted average construction allotment) the negative adjustment to the Needs will be increased to 2, 3, 4, etc. times the December 31 construction fund balance until such time the Construction Needs are adjusted to zero.

If the December 31 construction fund balance drops below 3 times the January construction allotment and subsequently increases to over 3 times, the multipliers will start over with one.

The adjusted average construction allotment used for this purpose shall not decrease in value from one year to the next.

If a city wishes to justify their balance in excess of said limits, and request an exemption to the excess balance adjustment, their request must be reviewed and approved by the Municipal Screening Board at their Annual Fall Meeting.

Low Balance Incentive – Oct. 2003 (Revised May, 2014)

The amount of the Excess Unencumbered Construction Fund Balance Adjustment will be redistributed as a positive adjustment to the Construction Needs of all municipalities whose December 31st construction fund balance is less than 1 times their January construction allotment of the same year. This redistribution will be based on a city's prorated share of its Unadjusted Construction Needs to the total Unadjusted Construction Needs of all participating cities times the total Excess Balance Adjustment**.**

After the Fact Right of Way Adjustment - Oct. 1965 (Revised June 1986, 2000, May 2014)

Right of Way Needs will not be included in the Needs calculations until the right of way is acquired and the actual cost established. At that time a Construction Needs adjustment will be made by annually adding the local cost (which is the total cost less county or trunk highway participation) for a 15-year period. Only right of way acquisition costs that are eligible for State-Aid funding will be included in the right-of-way Construction Needs adjustment. This Directive is to exclude all Federal or State grants.
When "After the Fact" Needs are requested for right-of-way projects that have been funded with local funds, but qualify for State Aid reimbursement, documentation (copies of warrants and

description of acquisition) must be submitted to the District State Aid Engineer. The City Engineer will input the data into the Needs Update program and the data will be approved by the DSAE.

After the Fact Railroad Bridge over MSAS Route Adjustment – May 2014

RR Bridge over MSAS Route Rehabilitation
Any structure that has been rehabilitated (Minnesota Administrative Rules, CHAPTER 8820, 8820.0200 DEFINITIONS, Subp. 8. Bridge rehabilitation) will not be included in the Needs calculations until the rehabilitation project has been completed and the actual cost established. At that time a Construction Needs adjustment will be made by annually adding the local cost (which is the total cost less county or trunk highway participation) for a 15-year period. Only State Aid eligible items are allowed to be included in this adjustment and all structure rehabilitation Needs adjustments must be input by the city and approved by the DSAE.

RR Bridge over MSAS Route Construction/Reconstruction
Any structure that has been constructed/reconstructed (Minnesota Administrative Rules, CHAPTER 8820, 8820.0200 DEFINITIONS, Subp. 31. Reconstruction) will not be included in the Needs calculations until the project has been completed and the actual cost established. At that time a Construction Needs adjustment will be made by annually adding the local cost (which is the total cost less county or trunk highway participation) for a 35-year period. Only State Aid eligible items are allowed to be included in this adjustment and all structure construction/reconstruction Needs adjustments must be input by the city and approved by the District State Aid Engineer.

After the Fact Railroad Crossing Adjustment

Any Railroad Crossing improvements will not be included in the Needs Calculations until the project has been completed and the actual cost established. At that time a Construction Needs adjustment will be made by annually adding the local cost (which is the total cost less county or trunk highway participation) to the annual Construction Needs for a 15 year period. Only State Aid eligible items are allowed to be included in this adjustment, and all Railroad Crossing Needs adjustments must be input by the city and approved by the District State Aid Engineer.

Excess Maintenance Account – June 2006

Any city which requests an annual Maintenance Allocation of more than 35% of their Total Allocation, is granted a variance by the Variance Committee, and subsequently receives the increased Maintenance Allocation will receive a negative Needs adjustment equal to the amount of money over and above the 35% amount transferred from the city's Construction Account to its Maintenance Account. The Needs adjustment will be calculated for an accumulative period of twenty years, and applied as a single one-year (one time) deduction each year the city receives the maintenance allocation.

After the Fact Retaining Wall Adjustment Oct. 2006 (Revised May 2014)

Retaining wall Needs will not be included in the Needs study until such time that the retaining wall has been constructed and the actual cost established. At that time a Needs adjustment will be made by annually adding the local cost (which is the total cost less county or trunk highway participation) for a 15 year period. Documentation of the construction of the retaining wall, including eligible costs, must be submitted to your District State Aid Engineer by July 1 to be included in that years Needs study. After the Fact needs on retaining walls will begin effective for all projects awarded after January 1, 2006. All Retaining Wall adjustments must be input by the city and approved by the District State Aid Engineer.

TRAFFIC - June 1971 (Revised May 2014)

Beginning in 1965 and for all future Municipal State Aid Street Needs Studies, the Needs Study procedure will utilize traffic data developed according the Traffic Forecasting and Analysis web site at http://www.dot.state.mn.us/traffic/data/coll-methods.html

Traffic Counting - Sept. 1973 (Revised June 1987, 1997, 1999, Oct. 2014)

Traffic data for State Aid Needs Studies will be developed as follows:

1) The municipalities in the metropolitan area cooperate with the State by agreeing to participate in counting traffic every two or four years at the discretion of the city.
2) The cities in the outstate area may have their traffic counted and maps prepared by State forces every four years, or may elect to continue the present procedure of taking their own counts and have state forces prepare the maps.
3) Any city may count traffic with their own forces every two years at their discretion and expense, unless the municipality has made arrangements with the Mn/DOT district to do the count.
4) On new MSAS routes, the ADT will be determined by the City with the concurrence of the District State Aid Engineer until such time the roadway is counted in the standard MnDOT count rotation.